4.8 Assumptions

The following assumptions apply to the cost estimate.

- All chemicals will be removed by the Owner prior to demolition, from the facilities to be demolished.
- All electrical equipment and wiring is de-energized prior to start of dismantlement.
- No extraordinary environmental costs for demolition have been included.
- PCB's are not present on site.
- Emergency or Black Start Diesels are not included.
- Handling, on-site and off-site disposal of hazardous materials would be performed in compliance with methods approved by Owner.
- Switchyards within the plant boundaries are not part of the scope, neither are access roads to these facilities. Fences and gates needed to protect the switchyard will be left in place.
- All items above grade and to a depth of two (2) feet will be demolished. Any other items buried more than two (2) feet will remain in place. All foundations are removed and buried on site.
- Underground piping, conduit and cable ducts will be abandoned in place.
- Underground piping larger than four (4) feet diameter will be filled with sand or slurry and capped at the ends to prevent collapse. Non-metal pipe will be collapsed.
- All demolished materials are considered debris, except for organic combustibles and non-embedded metals which have scrap value.
- The basis for salvage estimating is for scrap value only. No resale of equipment or material is included.
- Disturbed areas will be buried under two (2) feet of topsoil mulched and seeded with grass – no other landscaping is included.
- All borrow material is assumed to be purchased from nearby (10 mile round trip) offsite sources.
- Debris not suitable for burial is to be disposed of off-site. Assumed distance to final disposal is within a five (5) mile haul.
- The entire weight of transformers and generators are valued using only the carbon steel scrap value rate. No additional value is considered for the copper metal content. This is based on information supplied by scrap dealers. Additional cost to the scrap dealer to separate the different metals is offset by the increased value of the copper.

5.0 REFERENCES

Drawings utilized in the preparation of the demolition cost estimate are identified in Table 5-1.

Table 5-1
Reference Drawings

Document Number	Revision	Title
10-001 Sht 2	Rev B	General Arrangement – 4 GE 7EA Gas Turbines

EXHIBIT 1
H.D. Mattison Plant Unit 1-4
Conceptual Demolition Cost Estimate No. 24245F

AEP SWEPCO
MATTISON POWER STATION
DEMOLITION COST ESTIMATE

Estimator	GA
Labor rate table	20ARLIT
Project No.	A13351.021
Estimate Date	8/17/20
Reviewed By	BA
Approved By	BA
Estimate No.	24245F

Estimate No 24245F
Project No A13351 021
Estimate Date 8/17/20
Prep /Rev/App GA/BA/BA

AEP SWEPCO
MATTISON POWER STATION
DEMOLITION COST ESTIMATE

Group	Description	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
10 00.00	WHOLE PLANT DEMOLITION				31,216	1,370 907	704,071	2,074 978
18 00 00	SCRAP VALUE		(638,204)					(638 204)
21 00 00	CIVIL WORK	46 404		676,000	910	41 669	86,050	850,123
	TOTAL DIRECT	46,404	(638,204)	676,000	32,126	1,412,576	790,121	2,286,897

Estimate No 24245F
Project No A13351 021
Estimate Date 8/17/20
Prep /Rev/App GA/BA/BA

AEP SWEPCO
MATTISON POWER STATION
DEMOLITION COST ESTIMATE

Estimate Totals

Description	Amount	Totals	Hours
Labor	1 412 576		32,126
Material	676,000		
Subcontract	46,404		
Construction Equipment	790,121		
Scrap Value	(638,204)		
	2,286,897	2,286,897	
General Conditions			
Additional Labor Costs			
90-1 Labor Supervision	84 800		
90-2 Show-up Time	28 300		
90-3 Cost Due To OT 5-10's			
90-4 Cost Due To OT 6-10's			
90-5 Per Diem			
Site Overheads			
91-1 Construction Management	152,600		
91-2 Field Office Expenses	33 600		
91-3 Material&Quality Control			
91-4 Site Services			
91-5 Safety	30,100		
91-6 Temporary Facilities	22,900		
91-7 Temporary Utilities			
91-8 Mobilization/Demob	24,200		
91-9 Legal Expenses/Claims	3,600		
Other Construction Indirects			
92-1 Small Tools & Consumables	15 300		
92-2 Scaffolding			
92-3 General Liability Insur	15 300		
92-4 Constr Equip Mob/Demob	7 900		
92-5 Freight on Material	33 800		
92-6 Freight on Scrap			
92-7 Sales Tax			
92-8 Contractors G&A	231 600		
92-9 Contractors Profit	330,800		
	1,014 800	3,301,697	
Project Indirect Costs			
93-1 Engineering Services			
93-2 CM Support			
93-3 Start-Up/Commissioning			
93-4 Start-Up/Spare Parts			
93-5 Excess Liability Insur			
93-6 Sales Tax On Indirects			
93-7 Owners Cost	394 000		
93-8 EPC Fee			
	394,000	3 695,697	
Contingency			
94-1 Contingency on Const Eq	93 200		
94-3 Contingency on Material	83 100		
94-4 Contingency on Labor	213,100		
94-5 Contingency on Subcontr	4 600		
94-6 Contingency on Scrap	63 800		
94-7 Contingency on Indirect	39,400		
	497 200	4 192,897	
Escalation			
96-1 Escalation on Const Equip			
96-3 Escalation on Material			
96-4 Escalation on Labor			
96-5 Escalation on Subcontract			
96-6 Escalation on Scrap			
96-7 Escalation on Indirects			
		4 192 897	
98 Interest During Constr			
		4 192,897	
Total		**4,192,897**	

Estimate No 24245F
Project No A13351 021
Estimate Date 8/17/20
Prep/Rev/Appr GA/BA/BA

AEP SWEPCO
MATTISON POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man-Hours	Labor Cost	Equip Amount	Total Cost
10 00.00		WHOLE PLANT DEMOLITION									
	10 21 00	CIVIL WORK									
		FENCING REMAINS IN PLACE		2 500 00 LF	-	-		63	2,831	2,844	5,675
		PAVED SURFACES		4 800 00 SY	-	-		576	26,093	26,208	52,301
		CIVIL WORK						639	28,924	29,052	57,976
	10 22 00	CONCRETE									
		BUILDING/EQUIPMENT FOUNDATION/PAD	CT FOUNDATIONS MATS	12,000 00 CY	-	-		13 500	613,845	292 410	906,255
		BUILDING/EQUIPMENT FOUNDATION/PAD	TANK FOUNDATIONS AND BERMS	265 00 CY	-	-		298	13,556	6,457	20,013
		BUILDING/EQUIPMENT FOUNDATION/PAD	MISCELLANEOUS EQUIPMENT AND SITE BUILDING FOUNDATIONS	1,000 00 CY	-	-		1 125	51,154	24,368	75,521
		BUILDING/EQUIPMENT FOUNDATION/PAD	NEW WAREHOUSE, 60' X 40' X 18' HIGH	133 00 CY	-	-		150	6,803	3,241	10,044
		TURBINE PEDESTAL		2 000 00 CY	-	-		3,600	163,692	77 976	241,668
		WALKWAYS		100 00 CY	-	-		53	2,387	1,137	3,524
		CONCRETE						18,725	851,437	405,589	1,257,026
	10 24 00	ARCHITECTURAL									
		BUILDING	MAINTENANCE/OFFICE/CONTROL	128,800 00 CF	-	-		386	16,522	10 556	27,079
		BUILDING	ELECTRICAL BUILDING	35,000 00 CF	-	-		105	4,490	2,869	7,358
		BUILDING	MISCELLANEOUS SITE BUILDINGS	30 000 00 CF	-	-		90	3 848	2,459	6,307
		BUILDING	NEW WAREHOUSE 60' X 40' X 18' HIGH	43 200 00 CF	-	-		130	5,542	3,541	9,082
		ARCHITECTURAL						711	30,402	19,425	49,827
	10 26 00	MISCELLANEOUS STRUCTURAL ITEM									
		MISCELLANEOUS SMALL OBSTACLE REMOVAL FROM SITE		1 00 LT	-	-		1,000	41,620	22,440	64,060
		MISCELLANEOUS STRUCTURAL ITEM						1 000	41,620	22,440	64,060
	10 31 00	MECHANICAL EQUIPMENT									
		COMBUSTION TURBINE	4 EACH GE 85 4 MW	2,000 00 TN	-	-		7,000	288,890	157,080	445,970
		TANKS AND SILOS	WATER STORAGE TANK, CARBON STEEL, 300,000 GAL	32 00 TN	-	-		86	3,566	1,939	5,505
		TANKS AND SILOS	DEMIN WATER STORAGE TANK, STAINLESS STEEL 300 000 GAL 2 EACH	63 00 TN	-	-		170	7,020	3,817	10,837
		MISCELLANEOUS EQUIPMENT		3 00 TN	-	-		8	334	182	516
		MECHANICAL EQUIPMENT						7,265	299 810	163,018	462,828
	10 35 00	PIPING									
		PIPING, VALVES AND HANGERS		200 00 TN	-	-		405	16,714	9 088	25,803
		PIPING						405	16,714	9 088	25,803
	10 41 00	ELECTRICAL EQUIPMENT									
		OUTDOOR LIGHT POLE / FIXTURE		1 00 LT	-	-		150	6,191	3,366	9,557
		MISCELLANEOUS ELECTRICAL EQUIPMENT		500 00 TN	-	-		1,782	73,523	39,977	113,499
		ELECTRICAL EQUIPMENT						1 932	79,713	43,343	123,056
	10 43 00	CABLE									
		COPPER WIRE / CABLE		54 00 TN	-	-		540	22,286	12,118	34,403
		CABLE						540	22,286	12,118	34,403
		WHOLE PLANT DEMOLITION						**31,216**	**1,370,907**	**704,071**	**2,074,978**
18.00.00		SCRAP VALUE									
	18 10 00	CARBON STEEL									
		CARBON STEEL		-2,798 00 TN	-	(464,468)	-			-	(464,468)
		CARBON STEEL				(464,468)					(464,468)
	18 20 00	STAINLESS STEEL									

Estimate No 24245F
Project No A13351 021
Estimate Date 8/17/20
Prep/Rev/Appr GA/BA/BA

AEP SWEPCO
MATTISON POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
	18 20 00	STAINLESS STEEL									
		STAINLESS STEEL	DEMIN WATER STORAGE TANK, STAINLESS STEEL, 300,000 GAL, 2 EACH	-63 00 TN	-	(52,290)	-				(52,290)
		STAINLESS STEEL				(52,290)					(52,290)
	18 30 00	COPPER									
		#1 INSULATED COPPER WIRE 65%		-54 00 TN	-	(121,446)	-				(121,446)
		COPPER				(121,446)					(121,446)
		SCRAP VALUE				**(638,204)**					**(638,204)**
21.00.00		**CIVIL WORK**									
	21 21 00	MASS FILL									
		MASS FILL, COMMON EARTH USING DUMP TRUCK 10 MI ROUND TRIP	COVER DISTURBED AREAS OF SITE AND PONDS WITH 2FT OF SOIL	26,000 00 CY	-	-	676,000	910	41,669	86 050	803,719
		MASS FILL					676 000	910	41,669	86,050	803,719
	21 47 00	LANDSCAPING									
		HYDRO SEEDING		9 00 AC	19,404	-	-		-	-	19,404
		LANDSCAPING			19,404						19,404
	21 52 00	WASTE DISPOSAL									
		DISPOSAL AND TRANSPORTATION FEE	BUILDING DEBRIS	1 500 00 CY	27 000	-				-	27 000
		WASTE DISPOSAL			27,000						27 000
		CIVIL WORK			**46,404**		**676,000**	**910**	**41,669**	**86,050**	**850,123**

H.W. Pirkey Plant Unit 1

CONCEPTUAL DEMOLITION COST ESTIMATE

Prepared for:
Southwestern Electric Power Company (Owner)
and American Electric Power

Project No. A13351.021
August 24, 2020
Revision 1

55 East Monroe Street
Chicago, IL 60603-5780 USA

Revision Number	Date	Purpose	Prepared By	Reviewed By	Approved By	Page Numbers Affected
A	8/5/20	Comments	G. Amen	B. Andric		All
0	8/19/20	Use	G. Amen	B. Andric	A. Redd	All
1	8/24/20	Use	G. Amen	B. Andric	A. Redd	2

TABLE OF CONTENTS

Section		Page
1.0	INTRODUCTION	1
2.0	COST ESTIMATE SUMMARY	1
3.0	TECHNICAL BASIS	2
4.0	COMMERCIAL BASIS	3
4.1	General Information	3
4.2	Quantities/Material Cost	3
4.3	Construction Labor Wages	3
4.3.1	Labor Work Schedule and Incentives	3
4.3.2	General Conditions Costs	3
4.4	Scrap Value	4
4.5	Indirect Costs	4
4.6	Escalation	4
4.7	Contingency	4
4.8	Assumptions	5
5.0	REFERENCES	6

EXHIBIT	DESCRIPTION
1	Conceptual Demolition Cost Estimate No. 24252F

1.0 INTRODUCTION

The H. W. Pirkey Plant located near Marshall, Texas in Harrison County is owned and operated by Southwestern Electric Power Company (SWEPCO), a subsidiary of American Electric Power (AEP). The plant consists of one generating unit with a generating capacity of 721 megawatts. Unit 1 was placed in operation in 1985.

Sargent & Lundy (S&L) previously prepared a Conceptual Demolition Cost Estimate for H.W. Pirkey Plant Unit 1 in 2012 and 2016. AEP recently contracted S&L to update the previously prepared cost estimate to 2020 pricing levels. The objective of the conceptual demolition cost estimate is to determine the gross demolition costs for H.W. Pirkey Plant Unit 1 (including gross salvage credits and any other benefits). The cost estimate considers the demolition/dismantlement methodology which complies with current OSHA rules and regulations.

2.0 COST ESTIMATE SUMMARY

Conceptual Demolition Cost Estimate No 24252F, was prepared and is included as Exhibit 1. The cost estimate is structured into a code of accounts as identified in Table 2-1.

Table 2-1
Cost Estimate Code of Accounts

Account Number	Description
10	Demolition Costs
18	Scrap Value Costs
21	Civil Work Costs
90, 91, 92	General Conditions Costs
93	Indirect Costs
94	Contingency Costs
96	Escalation Costs

The results of the cost estimate are provided in Table 2-2 below:

Table 2-2
Cost Estimate Results Summary

Description	Total Cost
Demolition Direct Cost	$ 17,451,417
Scrap Value	($ 8,323,730)
General Conditions Cost	$ 5,023,000
Indirect Cost	$ 2,247,400
Contingency Cost	$ 3,304,600
Total Project Cost	$ 19,702,687

3.0 TECHNICAL BASIS

The scope of dismantlement includes the complete H.W. Pirkey Plant Unit 1 generating facility and plant common services associated with the unit. Common facilities include:

- Roadways
- Coal and Lime Receiving Systems
- Outlying Structures
- Main and Auxiliary Power Transformers

The following are excluded from the scope of the conceptual demolition cost estimate:

- Ash Pond Removal
- Asbestos Removal
- Switchyard Demolition
- Demolition of Access Roads to the Switchyard
- Cooling lake and intake and discharge canals

The following items were included in the current cost estimate and were not included in the 2016 cost estimate:

- None

Revisions to the plant facilities that would affect the current cost estimate were provided by plant personnel through correspondence.

4.0 COMMERCIAL BASIS

4.1 General Information

The Conceptual Demolition Cost Estimate prepared for the H.W. Pirkey Plant is a conceptual estimate of the cost to dismantle H.W. Pirkey Plant Unit 1. Costs were calculated for (1) demolition of existing plant structures and equipment and associated site restoration costs, (2) scrap value of metals, (3) associated indirect costs, and (4) contingency. All units used in the cost estimate are U.S. Standard and all costs are in US Dollars (2020 levels). A one (1) year demolition schedule is anticipated not including asbestos removal (to be performed prior to start of demolition work).

4.2 Quantities/Material Cost

Quantities of pieces of equipment and/or bulk material commodities used in this cost estimate were intended to be reasonable and representative of projects of this type. Material quantities were estimated from the site plot plan and other drawings and data provided by AEP and Plant Personnel.

4.3 Construction Labor Wages

Craft labor rates (Craft Hourly Rate) for the cost estimate are based on the prevailing wages for Dallas, Texas as published in "R.S. Means Labor Rates for the Construction Industry", 2020 Edition. These prevailing rates are representative of union or non-union rates, whichever is prevailing in the area. Costs have been added to cover social security, workmen's compensation, federal and state unemployment insurance. The resulting burdened craft rates were then used to develop typical crew rates applicable to the task being performed

4.3.1 Labor Work Schedule and Incentives

The estimate assumed a 5x8 work week. No other labor incentives are included.

4.3.2 General Conditions Costs

Allowances were included in the cost estimate as direct costs as noted for the following:

- Labor Supervision
- Construction Management
- Field Office Expenses
- Safety
- Temporary Facilities
- Mobilization / Demobilization
- Legal Expenses / Claims
- Small Tools & Consumables
- General Liability Insurance
- Construction Equipment Mobilization / Demobilization
- Freight on Material
- Contractor's General and Administrative Costs
- Contractor's Profit

4.4 Scrap Value

The value of scrap is based on "Scrap Metals Market Watch" as published in the July 2020 Edition of "American Recycler News" (www.americanrecycler.com) using Zone 3 (USA Southwest). The values obtained are delivered prices to the recycler. Transportation cost to the recycler is assumed @ 30 $/ton resulting in the values below:

- Carbon Steel Value @ 166 $/ton
- Copper Value @ 4,270 $/ton
- #1 Insulated Copper Wire 65% @ 2249 $/ton
- Stainless Steel @ 830 $/ton

Note: 1 Ton = 2,000 Lbs

4.5 Indirect Costs

Allowances were included in the cost estimate as indirect costs as noted for the following:

- Engineering, Procurement and Project Services: None included.
- Construction Management Support: None included.
- Owners Cost: Included as 10.0% of the total direct labor and material cost. Owners Costs include owner project engineering, administration and construction management, permits and fees, legal expenses, taxes, etc.

4.6 Escalation

No allowance for escalation was included in the cost estimate.

4.7 Contingency

We believe the available information and inputs to the demolition cost estimate warrant a 15% contingency. However, we have applied a 10% contingency in the current demolition cost estimate because the Commission ordered the use of a 10% contingency in SWEPCO's 2016 rate case (Docket No. 46449). Allowances were included in the cost estimate as contingency as noted for the following:

- Scrap Value: Included as a 10.0% reduction in the salvage value resulting in a total net reduction in the salvage value. The contingency assumes a potential drop in salvage value thus increasing the project cost.
- Material: Included as 10.0% of the total material cost.
- Labor: Included as 10.0% of the total labor cost.
- Indirect: Included as 10.0% of the total indirect cost.

4.8 Assumptions

The following assumptions apply to the cost estimate.

- All chemicals will be removed by the Owner prior to demolition, from the facilities to be demolished.
- All coal and fuel oil will be consumed prior to demolition.
- All electrical equipment and wiring is de-energized prior to start of dismantlement.
- No extraordinary environmental costs for demolition have been included except for PCB removal.
- Handling, on-site and off-site disposal of hazardous materials would be performed in compliance with methods approved by Owner.
- Switchyards within the plant boundaries are not part of the scope, neither are access roads to these facilities. Fences and gates needed to protect the switchyard will be left in place.
- Emergency or black start diesels are not included.
- All items above grade and to a depth of two (2) feet will be demolished. Any other items buried more than two (2) feet will remain in place. All foundations are removed and buried on site.
- Underground piping, conduit and cable ducts will be abandoned in place.
- Underground piping larger than four (4) feet diameter will be filled with sand or slurry and capped at the ends to prevent collapse. Non-metal pipe will be collapsed.
- All demolished materials are considered debris, except for organic combustibles and non-embedded metals which have scrap value.
- The basis for salvage estimating is for scrap value only. No resale of equipment or material is included.
- Disturbed areas will be buried under two (2) feet of topsoil mulched and seeded with grass – no other landscaping is included.
- All borrow material is assumed to be from onsite sources.
- Debris not suitable for burial is to be disposed of off-site. Assumed distance to final disposal is within a five (5) mile haul.
- The entire weight of transformers and generators are valued using only the carbon steel scrap value rate. No additional value is considered for the copper metal content. This is based on information supplied by scrap dealers. Additional cost to the scrap dealer to separate the different metals is offset by the increased value of the copper.
- Concrete / Brick chimney(s) will be demolished using Top-To-Bottom, Piece-Meal, Non-Explosive demolition method.

5.0 REFERENCES

Drawings utilized in the preparation of the demolition cost estimate are identified in Table 5-1.

Table 5-1
Reference Drawings

Document Number	Revision	Title
M-1	Rev E	Site Development
M-2	Rev H	Property Development
M-3	Rev J	Plant Development
M-4	Rev B	Plant Layout
M-5, Sht 1	Rev K	General Arrangement, Grade Plan
M-5, Sht 2	Rev J	General Arrangement, Ground Floor Plan - North
M-5, Sht 3	Rev J	General Arrangement, Ground Floor Plan
M-5, Sht 4	Rev J	General Arrangement, Ground Floor Plan
M-5, Sht 5	Rev J	General Arrangement, Ground Floor Plan - South
M-6	Rev H	General Arrangement, Mezzanine Floor Plan
M-7, Sht 1	Rev H	General Arrangement, Main Floor Plan
M-7, Sht 3	Rev H	General Arrangement, Main Floor Plan - Upper
M-8	Rev J	General Arrangement, Boiler Burners Plans
M-9	Rev J	General Arrangement, Conveyor Floor Plan
M-10	Rev K	General Arrangement, Top of Boiler Plan
M-11	Rev J	General Arrangement, Miscellaneous Plans & Sections

EXHIBIT 1
H.W. Pirkey Plant Unit 1
Conceptual Demolition Cost Estimate No. 24252F

AEP SWEPCO
PIRKEY POWER STATION
DEMOLITION COST ESTIMATE

Estimator	GA
Labor rate table	20TXDAL
Project No.	A13351.021
Estimate Date	8/23/20
Reviewed By	BA
Approved By	BA
Estimate No.	24252F

Estimate No 24252F
Project No A13351 021
Estimate Date 8/23/20
Prep /Rev/App GA/BA/BA

AEP SWEPCO
PIRKEY POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Group	Description	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
10 00 00	WHOLE PLANT DEMOLITION	2,500 000			154,864	7,184,942	3 613,961	13,298 903
18 00 00	SCRAP VALUE		(8 323,730)					(8,323,730)
21 00 00	CIVIL WORK	1,748 042			17,169	879 913	1 524,559	4,152 514
	TOTAL DIRECT	4,248,042	(8,323,730)		172,033	8,064,855	5,138,520	9,127,687

Estimate No 24252F
Project No A13351 021
Estimate Date 8/23/20
Prep /Rev/App GA/BA/BA

AEP SWEPCO
PIRKEY POWER STATION
DEMOLITION COST ESTIMATE

Bergeron & Lundy

Estimate Totals

Description	Amount	Totals	Hours
Labor	8,064,855		172 033
Material			
Subcontract	4,248,042		
Construction Equipment	5,138 520		
Scrap Value	(8,323,730)		
	9,127 687	9 127,687	
General Conditions			
Additional Labor Costs			
90-1 Labor Supervision	483 900		
90-2 Show-up Time	161 300		
90-3 Cost Due To OT 5-10's			
90-4 Cost Due To OT 6-10's			
90-5 Per Diem			
Site Overheads			
91-1 Construction Management	871 000		
91-2 Field Office Expenses	191,600		
91-3 Material&Quality Control			
91-4 Site Services			
91-5 Safety	172,100		
91-6 Temporary Facilities	130 900		
91-7 Temporary Utilities			
91-8 Mobilization/Demob	138 000		
91-9 Legal Expenses/Claims	20,400		
Other Construction Indirects			
92-1 Small Tools & Consumables	87 100		
92-2 Scaffolding			
92-3 General Liability Insur	87 100		
92-4 Constr Equip Mob/Demob	51,400		
92-5 Freight on Material			
92-6 Freight on Scrap			
92-7 Sales Tax			
92-8 Contractors G&A	1,082,200		
92-9 Contractors Profit	1,546,000		
	5 023,000	14,150,687	
Project Indirect Costs			
93-1 Engineering Services			
93-2 CM Support			
93-3 Start-Up/Commissioning			
93-4 Start-Up/Spare Parts			
93-5 Excess Liability Insur			
93-6 Sales Tax On Indirects			
93-7 Owners Cost	2,247,400		
93-8 EPC Fee			
	2 247 400	16,398,087	
Contingency			
94-1 Contingency on Const Eq	606 400		
94-3 Contingency on Material			
94-4 Contingency on Labor	1 216 300		
94-5 Contingency on Subcontr	424 800		
94-6 Contingency on Scrap	832 400		
94-7 Contingency on Indirect	224,700		
	3 304 600	19 702,687	
Escalation			
96-1 Escalation on Const Equip			
96-3 Escalation on Material			
96-4 Escalation on Labor			
96-5 Escalation on Subcontract			
96-6 Escalation on Scrap			
96-7 Escalation on Indirects			
		19 702,687	
98 Interest During Constr			
		19,702,687	
Total		**19,702,687**	

Estimate No 24252F
Project No A13351 021
Estimate Date 8-23/20
Prep/Rev/Appr GA/BA/BA

AEP SWEPCO
PIRKEY POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Group	Phase	Description	Notes	Quantity		Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
10.00.00		WHOLE PLANT DEMOLITION										
	10 21 00	CIVIL WORK										
		FENCING REMAINS IN PLACE			LF	-	-					
		REMOVE RAILROAD TRACK RAIL TIES SPREAD BALLAST		19,300 00	TF	-	-		4 343	213 608	197 584	411,191
		PAVED SURFACES		40 660 00	SY	-	-		4 879	240,008	222,004	462,011
		CIVIL WORK							9,222	453,615	419,587	873,203
	10 22 00	CONCRETE										
		BUILDING/EQUIPMENT FOUNDATION/PAD	DRAFT EQUIPMENT FOUNDATION (2FT BELOW GRADE)	7,600 00	CY	-	-		8 550	422,969	185,193	608,162
		BUILDING/EQUIPMENT FOUNDATION/PAD	ASH HANDLING EQUIPMENT FOUNDATION (2FT BELOW GRADE)	3,600 00	CY	-	-		4,050	200,354	87,723	288,077
		BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION, FIRE WALLS, PIERS, CURBS, AND BASIN	200 00	CY	-	-		225	11,131	4,874	16 004
		BUILDING/EQUIPMENT FOUNDATION/PAD	MISCELLANEOUS EQUIPMENT PADS AND SITE BUILDING FOUNDATIONS	3,675 00	CY	-	-		4 134	204,528	89,551	294,078
		BUILDING/EQUIPMENT FOUNDATION/PAD	TANK AND PUMP FOUNDATIONS, CONCRETE BERMS	2 440 00	CY	-	-		2 745	135,795	59,457	195,252
		BUILDING/EQUIPMENT FOUNDATION/PAD	INTAKE CLOSURE	1 659 00	CY	-	-		1,866	92,330	40,426	132 755
		BUILDING/EQUIPMENT FOUNDATION/PAD	DISCHARGE CLOSURE	1 803 00	CY	-	-		2 028	100,344	43,935	144,278
		BUILDING/EQUIPMENT FOUNDATION/PAD	FUEL EQUIPMENT MATERIAL HANDLING	1 669 00	CY	-	-		1,878	92,886	40 669	133,555
		BUILDING/EQUIPMENT FOUNDATION/PAD	CONCRETE CABLE TRENCHES AND CABLE	1,500 00	CY	-	-		1 688	83,481	36,551	120,032
		BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION, FIRE WALLS, PIERS, CURBS, AND BASIN	200 00	CY	-	-		225	11,131	4,874	16,004
		BUILDING/EQUIPMENT FOUNDATION/PAD	ACI, CABR SYSTEM FOUNDATIONS	100 00	CY	-	-		113	5 565	2,437	8,002
		BUILDING/EQUIPMENT FOUNDATION/PAD	MILL REPAIR SHOP, 60' x 40' x 16'	178 00	CY	-	-		200	9,906	4,337	14,244
		MAIN POWER BLOCK FOUNDATION		5,569 00	CY	-	-		4,700	232,521	101,807	334,328
		ELEVATED CONCRETE FLOOR / ROOF		3,960 00	CY	-	-		2 384	117,937	51 638	169,575
		TURBINE PEDESTAL		2,705 00	CY	-	-		4,869	240 869	105 463	346,332
		DISCHARGE OUTFALL STRUCTURE		145 00	CY	-	-		109	5 380	2 356	7,735
		CIRC WATER PUMPHOUSE INTAKE & DISCHARGE STRUCTURE		500 00	CY	-	-		525	25 972	11,372	37,343
		CURBS		2,000 00	LF	-	-		24	1,187	520	1 707
		WALKWAYS		65 00	CY	-	-		34	1 688	739	2 427
		PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF	TURBINE ROOM, CONTROL HOUSE, MACHINE SHOP, WATER TREATMENT AREA	41,766 00	SF	-	-		626	29 758	19 647	49 405
		PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF	AIR HEATER ROOM, MISC	20 120 00	SF	-	-		302	14,336	9 464	23 800
		CONCRETE							41,275	2,040,066	903,030	2,943,096
	10 23 00	STEEL										
		STRUCTURAL, GIRT AND GALLERY STEEL		11 000 00	TN	-	-		11 176	522,925	180 604	703,529
		STRUCTURAL, GIRT AND GALLERY STEEL	CRUSHER HOUSE	1,530 00	TN	-	-		1,554	72,734	25 120	97,855
		STRUCTURAL, GIRT AND GALLERY STEEL	FGD STRUCTURES	640 00	TN	-	-		650	30,425	10 508	40,933
		STEEL							13 381	626,084	216 232	842,316
	10 24 00	ARCHITECTURAL										
		BUILDING	GUARDHOUSE	6 000 00	CF	-	-		18	812	492	1,304
		BUILDING	WATER TREATMENT, CHEM FEED AND CHLORINATION BUILDINGS	209,137 00	CF	-	-		627	28,296	17,141	45,437
		BUILDING	OFFICE SERVICE BUILDING	953,550 00	CF	-	-		2,861	129,015	78,153	207,168
		BUILDING	TRACTOR MAINTENANCE, 30' x 90' x 18' TALL	48,600 00	CF	-	-		146	6,576	3 983	10,559
		BUILDING	FGD STRUCTURES	575 970 00	CF	-	-		1,728	77,929	47 207	125,135
		BUILDING	SOOT BLOWER AIR COMPRESSOR BUILDING	156 240 00	CF	-	-		469	21,139	12,805	33,945
		BUILDING	MISCELLANEOUS SMALL SIZE BUILDINGS IN FGD AREA	79,500 00	CF	-	-		239	10,756	6 516	17,272
		BUILDING	ACI PUMP/COMPRESSOR CONTROL HOUSE 30 'x 60' x 16'	28,800 00	CF	-	-		86	3,897	2 360	6,257
		BUILDING	MILL REPAIR SHOP, 60' x 40' x 16'	38,400 00	CF	-	-		115	5,196	3 147	8 343
		BUILDING	NORTH WAREHOUSE #1, 125' x 100' x 14' TALL	175 000 00	CF	-	-		525	23,678	14 343	38,021
		BUILDING	NORTH WAREHOUSE #2, 125' x 50' x	105,000 00	CF	-	-		315	14 207	8,606	22 812

Estimate No 24252F
Project No A13351 021
Estimate Date 8/23/20
Prep/Rev/Appr GA/BA/BA

AEP SWEPCO
PIRKEY POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
	10 24 00	ARCHITECTURAL									
		BUILDING	14 TALL	105 000 00 CF	-	-		315	14,207	8,606	22 812
		BUILDING	NORTH WAREHOUSE #3, 125' x 50 x 12' TALL	90,000 00 CF	-	-		270	12 177	7,376	19,553
		METAL SIDING		139 964 00 SF	-	-		840	39 890	26,336	66,225
		MASONRY WALLS		46 703 00 SF	-	-		374	16 850	10,207	27 058
		ARCHITECTURAL						8 612	390 417	238.673	629 089
	10 25 00	CONCRETE CHIMNEY & STACK									
		CONCRETE CHIMNEY, BRICK LINER, DEMOLITION TOP-TO-BOTTOM PIECE-MEAL NON-EXPLOSIVE METHOD	525 FT TALL X 62 FT BASE	1 00 LS	2,500 000	-					2,500 000
		CONCRETE CHIMNEY & STACK			2,500,000						2,500 000
	10 26 00	MISCELLANEOUS STRUCTURAL ITEM									
		ELEVATOR		1 00 EA	-	-		150	6 405	3,366	9,771
		MISCELLANEOUS SMALL OBSTACLE REMOVAL FROM SITE		1 00 LT	-	-		2,000	85,400	44,880	130,280
		MISCELLANEOUS STRUCTURAL ITEM						2,150	91,805	48,246	140,051
	10 31 00	MECHANICAL EQUIPMENT									
		MAIN BOILER AND APPURTENANCES, INCL ID, FD FANS AND MOTORS		11,300 00 TN	-	-		22,883	1,070 672	492,660	1 563 332
		STEAM TURBINE GENERATOR		1,900 00 TN	-	-		3,848	164 288	86,338	250 626
		FLUES AND DUCTS INCL BREACHING		950 00 TN	-	-		2 565	120,016	55 224	175 241
		BAGHOUSE		5,700 00 TN	-	-		11,543	540 074	248,510	788 584
		ASH HANDLING		350 00 TN	-	-		945	40 352	21,206	61,557
		CONVEYORS, TRUSSES, BENTS EQUIPMENT		1,330 00 TN	-	-		3,591	153,336	80,582	233,918
		CONVEYORS, TRUSSES, BENTS EQUIPMENT, RECLAIM EQUIPMENT		3,500 00 TN	-	-		9,450	403,515	212,058	615,573
		DUST COLLECTOR EQUIPMENT		250 00 TN	-	-		675	28 823	15,147	43 970
		FEEDWATER SYSTEM DEAERATING EQUIPMENT		200 00 TN	-	-		405	17,294	9,088	26,382
		MISCELLANEOUS SMALL TANKS		120 00 TN	-	-		324	13,835	7,271	21 105
		MISCELLANEOUS FUEL OIL EQUIPMENT		70 00 TN	-	-		189	8 070	4,241	12,311
		ACI CABR SYSTEM		64 00 TN	-	-		173	7,379	3 878	11,256
		MISCELLANEOUS STORAGE TANKS AND PUMPS		250 00 TN	-	-		675	28 823	15 147	43 970
		TANKS	FUEL OIL STORAGE TANK, (2,100,000 GAL)	263 00 TN	-	-		533	22,741	11 951	34,692
		WATER TREATMENT DEMINERALIZATION & CHEMICAL TREATMENT EQUIPMENT		250 00 TN	-	-		506	21 617	11,360	32 977
		MISCELLANEOUS EQUIPMENT		570 00 TN	-	-		1,154	49 286	25,901	75,188
		FGD EQUIPMENT		600 00 TN	-	-		1,215	51,881	27,265	79,145
		TURBINE ROOM OH CRANE 80/20 TON		1 00 EA	-	-		300	12,810	6,732	19,542
		TURBINE ROOM GANTRY CRANE 5 TON		1 00 EA	-	-		28	1 196	628	1,824
		CONDENSER		460 00 TN	-	-		932	39 775	20,903	60,678
		CIRCULATING WATER SYSTEM EQUIPMENT		450 00 TN	-	-		911	38,910	20,448	59,359
		CIRCULATING WATER SYSTEM EQUIPMENT	20 TN GANTRY CRANE	30 00 TN	-	-		61	2,594	1,363	3,957
		MECHANICAL EQUIPMENT						62,904	2,837 285	1,377,902	4,215,187
	10 34 00	HVAC									
		MAIN BUILDING HVAC		1 00 LT	-	-		1,500	64,050	33,660	97,710
		HVAC						1,500	64,050	33,660	97,710
	10 35 00	PIPING									
		PIPING VALVES AND HANGERS	BOILER AND TURBINE PLANT	2,500 00 TN	-	-		5,063	216,169	113,603	329,771
		CIRCULATING WATER SYSTEM EQUIPMENT PIPING AND TUNNELS		1 00 LT	-	-		900	38 430	20,196	58,626
		PIPING VALVES AND HANGERS	BOP	222 00 TN	-	-		450	19 196	10,088	29,284
		HYDRANTS		1 00 LS	-	-		188	9 223	8,531	17,754
		PIPING						6 600	283 018	152,418	435.435
	10 41 00	ELECTRICAL EQUIPMENT									
		TRANSFORMERS	MPT AND AUXILIARY TRANSFORMER	369 00 TN	-	-		986	42,101	22 125	64,226
		LIGHT FIXTURE		2,000 00 EA	-	-		800	34 160	17 952	52,112
		MISCELLANEOUS ELECTRICAL EQUIPMENT	GENERATOR BUS INCLUDED	468 00 TN	-	-		1,667	71 202	37,418	108,620

Estimate No 24252F
Project No A13351 021
Estimate Date 8/23/20
Prep/Rev/Appr GA/BA/BA

AEP SWEPCO
PIRKEY POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
	10 41.00	ELECTRICAL EQUIPMENT									
		OUTDOOR LIGHTING		1 00 LT	-	-		750	36,893	34,125	71,018
		ELECTRICAL EQUIPMENT						4,203	184 355	111,620	295 975
	10 42 00	RACEWAY, CABLE TRAY & CONDUIT									
		CONDUIT		227 00 TN	-	-		1 476	63,004	33,110	96,114
		CABLE TRAY		227 00 TN	-	-		1 362	58,157	30,563	88,721
		RACEWAY CABLE TRAY, & CONDUIT						2,838	121,161	63,674	184,835
	10 43 00	CABLE									
		COPPER WIRE / CABLE		218 00 TN	-	-		2 180	93,086	48,919	142 005
		CABLE						2,180	93 086	48,919	142,005
		WHOLE PLANT DEMOLITION			**2,500,000**			**154,864**	**7,184,942**	**3,613,961**	**13,298,903**
18.00.00		**SCRAP VALUE**									
	18 10 00	CARBON STEEL									
		CARBON STEEL		-45,330 00 TN	-	(7,524,780)	-				(7 524,780)
		CARBON STEEL	RAILROAD TRACK RAIL	-708 00 TN	-	(117,528)	-				(117,528)
		CARBON STEEL	CONDENSER SHELL	-300 00 TN	-	(49,800)	-				(49,800)
		CARBON STEEL				(7,692,108)					(7,692,108)
	18 20 00	STAINLESS STEEL									
		STAINLESS STEEL	CONDENSER TUBES	-160 00 TN	-	(132,800)	-				(132,800)
		STAINLESS STEEL				(132 800)					(132,800)
	18 30 00	COPPER									
		SOLID COPPER	ISO PHASE	-2 00 TN	-	(8,540)	-				(8,540)
		#1 INSULATED COPPER WIRE 65%		-218 00 TN	-	(490,282)	-				(490,282)
		COPPER				(498 822)					(498,822)
		SCRAP VALUE				**(8,323,730)**					**(8,323,730)**
21 00 00		**CIVIL WORK**									
	21 17 00	Earthwork Excavation									
		EXCAVATE CONCRETE CHIMNEY DEBRIS AND DISPOSE ONSITE		8,522 00 CY	-	-		1,278	61,550	21,948	83,499
		Earthwork, Excavation						1,278	61,550	21,948	83,499
	21 21 00	MASS FILL									
		CUT & FILL CLAY 1500 FT HAUL 14 CY SCRAPER DOZER-SPREAD, COMPACTION, WATERING TRUCK	COVER DISTURBED AREAS OF SITE WITH 2FT OF SOIL	244,470 00 CY	-	-		15,891	818,363	1,502 610	2 320,974
		MASS FILL						15,891	818,363	1,502,610	2,320,974
	21 47 00	LANDSCAPING									
		HYDRO SEEDING		70 00 AC	150 920	-	-		-	-	150 920
		LANDSCAPING			150 920						150,920
	21 52.00	WASTE DISPOSAL									
		DISPOSAL AND TRANSPORTATION FEE	BUILDING DEBRIS	3 000 00 CY	54 000	-				-	54 000
		DISPOSAL FEE, CONTAMINATED MATERIAL	SLUDGE POND, METAL CLEANING POND (1 88 ACRES)	28 243 00 CY	1,242,692	-				-	1,242,692
		TRANSPORTATION, CONTAMINATED MATERIAL	SLUDGE POND, METAL CLEANING POND (1 88 ACRES)	28 243 00 CY	282 430	-				-	282 430
		DISPOSAL AND TRANSPORTATION FEE	OILY SAND BENEATH FUEL OIL TANK	600 00 CY	18,000	-				-	18,000
		WASTE DISPOSAL			1,597,122						1,597 122
		CIVIL WORK			**1,748,042**			**17,169**	**879,913**	**1,524,559**	**4,152,514**

J.W. Turk Plant Unit 1

CONCEPTUAL DEMOLITION COST ESTIMATE

Prepared for:
Southwestern Electric Power Company (Owner)
and American Electric Power

Project No. A13351.021
August 19, 2020
Revision 0

55 East Monroe Street
Chicago, IL 60603-5780 USA

Revision Number	Date	Purpose	Prepared By	Reviewed By	Approved By	Pages Affected
A	7/02/20	Comments	G. Amen	B. Andric		All
0	8/19/20	Use	G. Amen	B. Andric	A. Redd	All

TABLE OF CONTENTS

Section		Page
1.0	INTRODUCTION	1
2.0	COST ESTIMATE SUMMARY	1
3.0	TECHNICAL BASIS	2
4.0	COMMERCIAL BASIS	3
4.1	General Information	3
4.2	Quantities/Material Cost	3
4.3	Construction Labor Wages	3
4.3.1	Labor Work Schedule and Incentives	3
4.3.2	General Conditions Costs	3
4.4	Scrap Value	4
4.5	Indirect Costs	4
4.6	Escalation	4
4.7	Contingency	4
4.8	Assumptions	5
5.0	REFERENCES	6

EXHIBIT	DESCRIPTION
1	Demolition Cost Estimate No. 31562C

1.0 INTRODUCTION

The J.W. Turk Plant Unit 1 located near Fulton, Arkansas in Hempstead County is owned and operated by Southwestern Electric Power Company (SWEPCO). The plant consists of one (1) Super-Ultracritical Coal Fired Plant with a generating capacity of 600 megawatts. The unit was placed in service in 2012.

Sargent & Lundy (S&L) previously prepared Conceptual Demolition Cost Estimates for J.W. Turk Plant Unit 1 in 2012 and in 2016. AEP recently contracted S&L to update the previously prepared cost estimate to 2020 pricing levels. The objective of the conceptual demolition cost estimate is to determine the gross demolition costs for J.W. Turk Plant Unit 1 (including gross salvage credits and any other benefits). The cost estimate considers the demolition/dismantlement methodology which complies with current OSHA rules and regulations.

2.0 COST ESTIMATE SUMMARY

Conceptual Demolition Cost Estimate No 31562C was prepared and is included as Exhibit 1. The cost estimate is structured into a code of accounts as identified in Table 2-1.

Table 2-1
Cost Estimate Code of Accounts

Account Number	Description
10	Demolition Costs
18	Scrap Value Costs
21	Civil Work Costs
22	Concrete Work Costs
90, 91, 92	General Conditions Costs
93	Indirect Costs
94	Contingency Costs
96	Escalation Costs

The results of the cost estimate are provided in Table 2-2 below:

Table 2-2
Cost Estimate Results Summary

Description	Total Cost
Demolition Direct Cost	$ 16,222,544
Scrap Value	($ 6,926,096)
General Conditions Cost	$ 5,281,600
Indirect Cost	$ 2,150,400
Contingency Cost	$ 3,058,100
Total Project Cost	$ 19,786,548

3.0 TECHNICAL BASIS

The scope of dismantlement includes the complete J.W. Turk Plant Unit 1 generating facility and plant common services associated with the unit. Common facilities include:

- Roadways
- Coal and Lime Receiving Systems
- Outlying Structures
- Main and Auxiliary Power Transformers

The following are excluded from the scope of the conceptual demolition cost estimate:

- Ash Pond Removal
- Asbestos Removal
- Switchyard Demolition
- Demolition of Access Roads to the Switchyard

The following items were included in the current cost estimate and were not included in the 2016 cost estimate:

- RSO Shop

Revisions to the plant facilities that would affect the current cost estimate were provided by plant personnel through correspondence.

4.0 COMMERCIAL BASIS

4.1 General Information

The Conceptual Demolition Cost Estimate prepared for the J.W. Turk Plant is a conceptual estimate of the cost to dismantle J.W. Turk Plant Unit 1. Costs were calculated for (1) demolition of existing plant structures and equipment and associated site restoration costs, (2) scrap value of metals, (3) associated indirect costs, and (4) contingency. All units used in the cost estimate are U.S. Standard and all costs are in US Dollars (2020 levels). A two (2) year demolition schedule is anticipated not including asbestos removal (to be performed prior to start of demolition work).

4.2 Quantities/Material Cost

Quantities of pieces of equipment and/or bulk material commodities used in this cost estimate were intended to be reasonable and representative of projects of this type. Material quantities were estimated from the site plot plan and other drawings and data provided by AEP and Plant Personnel.

4.3 Construction Labor Wages

Craft labor rates (Craft Hourly Rate) for the cost estimate are based on the prevailing wages for Little Rock Arkansas as published in "R.S. Means Labor Rates for the Construction Industry", 2020 Edition. These prevailing rates are representative of union or non-union rates, whichever is prevailing in the area. Costs have been added to cover social security, workmen's compensation, federal and state unemployment insurance. The resulting burdened craft rates were then used to develop typical crew rates applicable to the task being performed.

4.3.1 Labor Work Schedule and Incentives

The estimate assumed a 5x8 work week. No other labor incentives are included.

4.3.2 General Conditions Costs

Allowances were included in the cost estimate as noted for the following:

- Labor Supervision
- Construction Management
- Field Office Expenses
- Safety
- Temporary Facilities
- Mobilization / Demobilization
- Legal Expenses / Claims
- Small Tools & Consumables
- General Liability Insurance
- Construction Equipment Mobilization / Demobilization
- Freight on Material

- Contractor's General and Administrative Costs
- Contractor's Profit

4.4 Scrap Value

The value of scrap is based on "Scrap Metals Market Watch" as published in the July 2020 Edition of "American Recycler News" (www.americanrecycler.com) using Zone 3 (USA Southwest). The values obtained are delivered prices to the recycler. Transportation cost to the recycler is assumed @ 30 $/ton resulting in the values below:

- Mixed Steel Value @ 166 $/ton
- Copper Value @ 4,270 $/ton
- #1 Insulated Copper Wire 65% @ 2249 $/ton
- Stainless Steel @ 830 $/ton
- Aluminum @ 930 $/ton

Note: 1 Ton = 2,000 Lbs

4.5 Indirect Costs

Allowances were included in the cost estimate as indirect costs as noted for the following:

- Engineering, Procurement and Project Services: None included.
- Construction Management Support: None included.
- Owners Cost: Included as 10.0% of the total direct labor and material cost. Owners Costs include owner project engineering, administration and construction management, permits and fees, legal expenses, taxes, etc.

4.6 Escalation

No allowance for escalation was included in the cost estimate.

4.7 Contingency

We believe the available information and inputs to the demolition cost estimate warrant a 15% contingency. However, we have applied a 10% contingency in the current demolition cost estimate because the Commission ordered the use of a 10% contingency in SWEPCO's 2016 rate case (Docket No. 46449). Allowances were included in the cost estimate as contingency as noted for the following:

- Scrap Value: Included as a 10.0% reduction in the salvage value resulting in a total net reduction in the salvage value. The contingency assumes a potential drop in salvage value thus increasing the project cost.
- Material: Included as 10.0% of the total material cost.
- Labor: Included as 10.0% of the total labor cost.

- Indirect: Included as 10.0% of the total indirect cost.

4.8 Assumptions

The following assumptions apply to the cost estimate.

- All chemicals will be removed by the Owner prior to demolition, from the facilities to be demolished.
- All coal and fuel oil will be consumed prior to demolition.
- All electrical equipment and wiring is de-energized prior to start of dismantlement.
- No extraordinary environmental costs for demolition have been included.
- Asbestos and PCB's are not present on-site.
- Handling, on-site and off-site disposal of hazardous materials would be performed in compliance with methods approved by Owner.
- Switchyards within the plant boundaries are not part of the scope, neither are access roads to these facilities. Fences and gates needed to protect the switchyard will be left in place.
- All items above grade and to a depth of two (2) feet will be demolished. Any other items buried more than two (2) feet will remain in place. All foundations are removed and buried on site.
- Underground piping, conduit and cable ducts will be abandoned in place.
- Underground piping larger than four (4) feet diameter will be filled with sand or slurry and capped at the ends to prevent collapse. Non-metal pipe will be collapsed.
- All demolished materials are considered debris, except for organic combustibles and non-embedded metals which have scrap value.
- The basis for salvage estimating is for scrap value only. No resale of equipment or material is included.
- Disturbed areas will be buried under two (2) feet of topsoil mulched and seeded with grass – no other landscaping is included.
- All borrow material is assumed to be from onsite sources.
- Debris not suitable for burial is to be disposed of off-site. Assumed distance to final disposal is within a five (5) mile haul.
- The entire weight of transformers and generators are valued using only the carbon steel scrap value rate. No additional value is considered for the copper metal content. This is based on information supplied by scrap dealers. Additional cost to the scrap dealer to separate the different metals is offset by the increased value of the copper.
- Concrete / Brick chimney(s) will be demolished using Top-To-Bottom, Piece-Meal, Non-Explosive demolition method.

5.0 REFERENCES

Drawings utilized in the preparation of the demolition cost estimate are identified in Table 5-1.

Table 5-1
Reference Drawings

Document Number	Revision	Title
0-40SVB104	Rev F	Admin/Service Building Partial Ground Floor sheet 1 Plan Architectural
0-40SVB105	Rev F	Admin/Service Building Partial Ground Floor Plan Architectural
0-40SVB108	Rev D	Admin/Service Building North & South Elevations Architectural
0-40SVB109	Rev C	Admin/Service Building East Elevation Architectural
0-40SVB110	Rev E	Admin/Service Building West Elevation Architectural
0-40SVB207	Rev C	Admin/Service Building East & West Elevations Architectural
0-40SVB206	Rev C	Admin/Service Building North & South Elevations Architectural
0-50STE000	Rev 2	Site Plan, General Arrangements
0-50STE001	Rev 2	Partial Site Plan, General Arrangements
0-12EZ000	Rev 2	Misc. Electrical, Main Generator & PWR BLK, 13.8 KV Bus, One Line Diagram
1-50STE000	Rev 2	Steam Gen Turbine Building, Ground Floor Elev. 101'0",
1-50STE001	Rev 2	Steam Gen Turbine Building, Mezzanine Level Elev. 127'0",
1-50STE002	Rev 2	Steam Gen Turbine Building, Operating Level Elev. 151'0",
1-50STE003	Rev 2	Steam Gen Turbine Building, Heater Levels Elev. 176'0" & 196'0"
1-50SGT004	Rev 1	Power Block Section A-A Elevation – Looking West
1-50SGT006	Rev 0	Steam Turbine Building, Operating Level Elev 151'0" Turbine Laydown Area General Arrangements
1-50SGT007	Rev 1	Steam Turbine Building, Section B-B Elevation Looking South, General Arrangements
1-50SGT008	Rev 1	AQCS Area Section C-C Elevation – Looking West, General Arrangements
1-50SVB104	Rev 0	Service Bldg Water Treatment Building Ground Floor El. 101'0" Equipment Arrangement

Document Number	Revision	Title
1-50SVB105	Rev 0	Service Bldg Water Treatment Building Ground Floor El. 101'0" Equipment Arrangement
1-32STE110	Rev 3	Waste Ash Silo Foundation Plans, Sections & Details
0812-FS001	Rev 1	Flow Diagram Coal Handling System (Roberts & Schaefer)
0-40mhs004	Rev F	Coal Handling Service Bldg Floor Plan
0-40mhs006	Rev E	Coal Handling Service Bldg, North & South Elevations
0-40mhs007	Rev E	Coal Handling Service Bldg, East & West Elevations
340-973-C501	Rev 2	Fly Ash Silo Roof –Plan at TOS Elev 245'0"
340-973-C101	Rev 1	Fly Ash Silo Plan and section - Wall Reinf't"
340-973-C102	Rev 1	Fly Ash Silo Floor Plan at TOC Elev 123'0"
86539J	Rev 4	General Arrangement Air Quality Control System, Lime Storage Area Plans & Sections
340-973-C102	Rev 1	Fly Ash Silo Floor Plan at TOC Elev 123'0"
51QW015	Rev 1	Waste Water System Pond Water Treatment Multimedia Skid
51QW016	Rev 2	Waste Water System Pond Water Treatment Multimedia Skid
51QW017	Rev 2	Waste Water System Pond Water Treatment Multimedia Skid
51QW018	Rev 1	Waste Water System Pond Water Treatment Sulfuric Acid Feed
51WW002	Rev 9	Waste Water System Pond Water Treatment Process Water Pond
51WW001	Rev 12	Waste Water System Coal Runoff Pond

EXHIBIT 1
J.W. Turk Plant Unit 1
Conceptual Demolition Cost Estimate No. 31562C

AEP
TURK STATION
DEMOLITION STUDY UPDATE

Estimator	GA
Labor rate table	20ARLIT
Project No.	A13351.021
Estimate Date	8/19/20
Reviewed By	BA
Approved By	BA
Estimate No.	31562C

Estimate No 31562C
Project No A13351 021
Estimate Date 8/19/20
Prep /Rev/App GA/BA/BA

AEP
TURK STATION
DEMOLITION STUDY UPDATE

Group	Description	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
10 00 00	WHOLE PLANT DEMOLITION	2,880 000			145,012	6,262,923	3 415,747	12,558 670
18 00 00	SCRAP VALUE		(6 926,096)		0			(6,926 096)
21 00 00	CIVIL WORK	685 708			62,394	2,858,428	10,320	3,554,456
22 00 00	CONCRETE			85,500	450	18,230	5,688	109 418
	TOTAL DIRECT	3,565,708	(6,926,096)	85,500	207,855	9,139,581	3,431,755	9,296,448

Estimate No 31562C
Project No A13351 021
Estimate Date 8/19/20
Prep /Rev/App GA/BA/BA

AEP
TURK STATION
DEMOLITION STUDY UPDATE

Estimate Totals

Description	Amount	Totals	Hours
Labor	9 139,581		207 855
Material	85,500		
Subcontract	3 565,708		
Construction Equipment	3 431,755		
Scrap Value	(6,926,096)		
	9 296,448	9 296,448	
General Conditions			
Additional Labor Costs			
90-1 Labor Supervision	548 400		
90-2 Show-up Time	182 800		
90-3 Cost Due To OT 5-10's			
90-4 Cost Due To OT 6-10's			
90-5 Per Diem			
Site Overheads			
91-1 Construction Management	987,100		
91-2 Field Office Expenses	217,200		
91-3 Material&Quality Control			
91-4 Site Services			
91-5 Safety	195,000		
91-6 Temporary Facilities	148,400		
91-7 Temporary Utilities			
91-8 Mobilization/Demob	156 400		
91-9 Legal Expenses/Claims	23,100		
Other Construction Indirects			
92-1 Small Tools & Consumables	98,700		
92-2 Scaffolding			
92-3 General Liability Insur	98,700		
92-4 Constr Equip Mob/Demob	34,300		
92-5 Freight on Material	4 300		
92-6 Freight on Scrap			
92-7 Sales Tax			
92-8 Contractors G&A	1 065,300		
92-9 Contractors Profit	1,521,900		
	5 281,600	14,578,048	
Project Indirect Costs			
93-1 Engineering Services			
93-2 CM Support			
93-3 Start-Up/Commissioning			
93-4 Start-Up/Spare Parts			
93-5 Excess Liability Insur			
93-6 Sales Tax On Indirects			
93-7 Owners Cost	2 150 400		
93-8 EPC Fee			
	2 150,400	16,728,448	
Contingency			
94-1 Contingency on Const Eq	405 000		
94-3 Contingency on Material	10 500		
94-4 Contingency on Labor	1 378 400		
94-5 Contingency on Subcontr	356,600		
94-6 Contingency on Scrap	692 600		
94-7 Contingency on Indirect	215,000		
	3 058,100	19 786,548	
Escalation			
96-1 Escalation on Const Equip			
96-3 Escalation on Material			
96-4 Escalation on Labor			
96-5 Escalation on Subcontract			
96-6 Escalation on Scrap			
96-7 Escalation on Indirects			
		19,786 548	
98 Interest During Constr			
		19 786,548	
Total		**19,786,548**	

Estimate No 31562C
Project No A13351 021
Estimate Date 8/19/20
Prep/Rev/Appr GA/BA/BA

AEP
TURK STATION
DEMOLITION STUDY UPDATE

Sargent & Lundy

Group	Phase	Description	Notes	Quantity		Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
10.00.00		WHOLE PLANT DEMOLITION										
	10 21.00	CIVIL WORK										
		FENCING REMAINS IN PLACE			LF	-	-					
		REMOVE RAILROAD TRACK RAIL, TIES, SPREAD BALLAST		24,600 00	TF	-	-		5 535	250 736	251,843	502,578
		PAVED SURFACES		11 733 00	SY	-	-		1 408	63,781	64,062	127,843
		CIVIL WORK							6 943	314 516	315,905	630 421
	10 22 00	CONCRETE										
		BUILDING/EQUIPMENT FOUNDATION/PAD	COAL HANDLING SERVICE BUILDING	205 00	CY	-	-		231	10,487	4 995	15 482
		BUILDING/EQUIPMENT FOUNDATION/PAD	ADMINISTRATION BUILDING	1 915 00	CY	-	-		2 154	97 959	46 664	144,623
		BUILDING/EQUIPMENT FOUNDATION/PAD	WATER TREATMENT BUILDING	1,707 00	CY	-	-		1 920	87 319	41 595	128 915
		BUILDING/EQUIPMENT FOUNDATION/PAD	RIVER WATER PUMPHOUSE	302 00	CY	-	-		340	15,448	7,359	22 807
		BUILDING/EQUIPMENT FOUNDATION/PAD	PLANT WAREHOUSE	222 00	CY	-	-		250	11,356	5,410	16 766
		BUILDING/EQUIPMENT FOUNDATION/PAD	LIME STORAGE SILO	157 00	CY	-	-		177	8,031	3 826	11,857
		BUILDING/EQUIPMENT FOUNDATION/PAD	FLY ASH SILO	2 279 00	CY	-	-		2,564	116,579	55 534	172,113
		BUILDING/EQUIPMENT FOUNDATION/PAD	MISC EQUIPMENT PADS AND SITE BLD FOUNDATIONS	35 00	CY	-	-		39	1 790	853	2,643
		BUILDING/EQUIPMENT FOUNDATION/PAD	ACIS BLOWER BUILDING	72 00	CY	-	-		81	3,683	1 754	5 438
		BUILDING/EQUIPMENT FOUNDATION/PAD	BAGHOUSE	406 00	CY	-	-		457	20,768	9,893	30,662
		BUILDING/EQUIPMENT FOUNDATION/PAD	REAGENT PREPARATION BUILDING	575 00	CY	-	-		647	29 413	14 011	43 425
		BUILDING/EQUIPMENT FOUNDATION/PAD	FLY ASH HEATER BUILDING	89 00	CY	-	-		100	4 553	2,169	6,721
		BUILDING/EQUIPMENT FOUNDATION/PAD	MECHANICAL EXHAUST BUILDING	122 00	CY	-	-		137	6,241	2,973	9,214
		BUILDING/EQUIPMENT FOUNDATION/PAD	RIVER WATER PUMPHOUSE	302 00	CY	-	-		340	15,448	7,359	22,807
		BUILDING/EQUIPMENT FOUNDATION/PAD	AQCS PDC	1,400 00	CY	-	-		1,575	71 615	34,115	105,730
		BUILDING/EQUIPMENT FOUNDATION/PAD	COOLING TOWER BASIN	2,961 00	CY	-	-		3,331	151,466	72 152	223 618
		BUILDING/EQUIPMENT FOUNDATION/PAD	ASH HANDLING EQUIPMENT	3 600 00	CY	-	-		4 050	184,154	87 723	271 877
		BUILDING/EQUIPMENT FOUNDATION/PAD	FUEL / MATERIAL HANDLING EQUIPMENT	1,669 00	CY	-	-		1,878	85,376	40,669	126,045
		BUILDING/EQUIPMENT FOUNDATION/PAD	COAL PDC	30 00	CY	-	-		34	1,535	731	2,266
		BUILDING/EQUIPMENT FOUNDATION/PAD	CRUSHER HOUSE PDC	60 00	CY	-	-		68	3,069	1,462	4,531
		BUILDING/EQUIPMENT FOUNDATION/PAD	COOLING TOWER PDC	60 00	CY	-	-		68	3,069	1 462	4 531
		BUILDING/EQUIPMENT FOUNDATION/PAD	LIME UNLOADING AREA PDC	220 00	CY	-	-		248	11,254	5,361	16,615
		BUILDING/EQUIPMENT FOUNDATION/PAD	COAL PILE SERVICE BUILDING ADDITION	106 00	CY	-	-		119	5,422	2,583	8 005
		BUILDING/EQUIPMENT FOUNDATION/PAD	WASTE WATER POND TREATMENT BUILDING	1,111 00	CY	-	-		1,250	56,832	27,072	83,904
		BUILDING/EQUIPMENT FOUNDATION/PAD	WASTE WATER POND SURGE TANK RING FOUNDATION	216 00	CY	-	-		243	11,049	5,263	16,313
		BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION FIRE WALLS PIERS CURBS, AND BASIN	230 00	CY	-	-		259	11,765	5,605	17 370
		BUILDING/EQUIPMENT FOUNDATION/PAD	DRAFT EQUIPMENT FOUNDATION (2FT BELOW GRADE)	2 007 00	CY	-	-		2 256	102 666	48 906	151 571
		BUILDING/EQUIPMENT FOUNDATION/PAD	FUEL EQUIPMENT FOUNDATION (2FT BELOW GRADE)	100 00	CY	-	-		113	5,115	2 437	7,552
		MAIN POWER BLOCK FOUNDATION	BOILER BUILDING MATERIAL HANDLING	3 987 00	CY	-	-		3 365	153,008	72 887	225 894
		MAIN POWER BLOCK FOUNDATION	TURBINE BUILDING	3,388 00	CY	-	-		2,859	130 020	61,936	191 956
		ELEVATED CONCRETE FLOOR / ROOF		1,080 00	CY	-	-		647	29 415	14 012	43 428
		TURBINE PEDESTAL		2,300 00	CY	-	-		4,140	188,246	89,672	277 918
		DISCHARGE CLOSURE	ABANDON IN PLACE		CY	-	-					
		CURBS		2 000 00	LF	-	-		24	1,091	520	1 611
		WALKWAYS		120 00	CY	-	-		63	2,865	1,365	4,229
		PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF	BOILER ROOM	52,714 00	SF	-	-		791	34,989	24 797	59 786
		PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF	TURBINE ROOM	42,660 00	SF	-	-		640	28,316	20,067	48,383
		PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF	TURBINE ELECTRICAL BUILDING	513 00	SF	-	-		8	341	241	582
		CONCRETE							37,464	1,701,755	825,432	2 527,187
	10 23 00	STEEL										
		STRUCTURAL GIRT AND GALLERY STEEL	BOILER BUILDING	1,672 00	TN	-	-		1,699	74,422	27 452	101,874
		STRUCTURAL, GIRT AND GALLERY STEEL	TURBINE BUILDING	2,014 00	TN	-	-		2 046	89,645	33,067	122,712
		LOAD CHIMNEY LINER STEEL PLATE PIECES, ALREADY CUT BY DEMOLITION CONTRACTOR INTO CONTAINER		443 00	TN	-	-		222	9,704	3,579	13,283
		STEEL							3 966	173 771	64 098	237,870
	10 24 00	ARCHITECTURAL										
		BUILDING	COAL HANDLING STORAGE	160,302 00	CF	-	-		481	20,564	13,138	33 702
		BUILDING	ADMINISTRATION	894 068 00	CF	-	-		2,682	114 691	73 278	187,969

Estimate No 31562C
Project No A13351 021
Estimate Date 8/19/20
Prep/Rev/Appr GA/BA/BA

AEP
TURK STATION
DEMOLITION STUDY UPDATE

Sargent & Lundy

Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
	10 24 00	ARCHITECTURAL									
		BUILDING	WATER TREATMENT	760 320 00 CF	-	-		2 281	97 534	62,316	159,850
		BUILDING	ADMINISTRATION - STEEL FRAME/CONCRETE BLOCK BUILDING	318 600 00 CF	-	-		956	40 870	26 112	66,982
		BUILDING	WAREHOUSE	132,000 00 CF	-	-		396	16 933	10,819	27,752
		BUILDING	MISCELLANEOUS SMALL SIZE BUILDINGS	13,920 00 CF	-	-		42	1,786	1,141	2,927
		BUILDING	ACI BLOWER	38 500 00 CF	-	-		116	4,939	3,155	8,094
		BUILDING	REAGENT PREPARATION	590,520 00 CF	-	-		1,772	75,752	48,399	124,151
		BUILDING	FLY ASH	52,800 00 CF	-	-		158	6,773	4,327	11,101
		BUILDING	MECHANICAL EXHAUST	66,000 00 CF	-	-		198	8 466	5,409	13,876
		BUILDING	RIVER WATER PUMPHOUSE	39,400 00 CF	-	-		118	5,054	3,229	8,283
		BUILDING	COAL PILE SERVICE BUILDING ADDITION	171,000 00 CF	-	-		513	21 936	14,015	35 951
		BUILDING	WASTE WATER POND TREATMENT	800 000 00 CF	-	-		2 400	102,624	65,568	168,192
		BUILDING	CRUSHER HOUSE	96,000 00 CF	-	-		480	21,029	7,757	28,786
		BUILDING	RSO SHOP, 20 FT X 30 FT X 20 FT TALL	1,200 00 CF	-	-		6	263	97	360
		METAL SIDING		74 000 00 SF	-	-		444	19,647	13,924	33,571
		MASONRY WALLS		2,203 00 SF	-	-		18	754	481	1,235
		ARCHITECTURAL						13 080	559 614	353,167	912 781
	10 25 00	CONCRETE CHIMNEY & STACK									
		CONCRETE CHIMNEY, STEEL LINER, DEMOLITION TOP-TO-BOTTOM PIECE-MEAL, NON-EXPLOSIVE METHOD	630 FT TALL X 50 FT BASE	1 00 LS	2 880 000	-					2,880 000
		CONCRETE CHIMNEY & STACK			2 880,000						2,880 000
	10 26 00	MISCELLANEOUS STRUCTURAL ITEM									
		ELEVATOR		1 00 EA	-	-		150	6,191	3 366	9,557
		MISCELLANEOUS SMALL OBSTACLE REMOVAL FROM SITE		1 00 LT	-	-		2,000	82 540	44 880	127,420
		MISCELLANEOUS STRUCTURAL ITEM						2,150	88,731	48,246	136,977
	10 31 00	MECHANICAL EQUIPMENT									
		MAIN BOILER AND APPURTENANCES, INCL ID, FD FANS AND MOTORS		8,050 00 TN	-	-		16,301	714,158	350,966	1,065,124
		STEAM TURBINE GENERATOR		630 00 TN	-	-		1,276	52,650	28,628	81,278
		FLUES AND DUCTS INCL BREACHING		1,300 00 TN	-	-		3,510	153 773	75 570	229,343
		FLUES AND DUCTS INCL BREACHING		1,300 00 TN	-	-		3,510	153,773	75 570	229,343
		BAGHOUSE		782 00 TN	-	-		1,584	69,375	34,094	103,469
		AIR HEATERS		1,200 00 TN	-	-		2,430	100,286	54,529	154,815
		CRUSHER HOUSE		1 530 00 TN	-	-		4,131	170 486	92,700	263 186
		ASH HANDLING		350 00 TN	-	-		945	39,000	21,206	60,206
		CONVEYORS TRUSSES BENTS, EQUIPMENT		1 330 00 TN	-	-		3,591	148,201	80 582	228 783
		CONVEYORS TRUSSES, BENTS, EQUIPMENT, RECLAIM EQUIPMENT		3,500 00 TN	-	-		9,450	390,002	212,058	602,060
		DUST COLLECTOR EQUIPMENT		250 00 TN	-	-		675	27,857	15 147	43 004
		FEEDWATER SYSTEM DEAERATING EQUIPMENT		150 00 TN	-	-		304	12,536	6 816	19 352
		LIME STORAGE SILO		102 00 TN	-	-		275	11,366	6 180	17,546
		MISCELLANEOUS SMALL TANKS		52 00 TN	-	-		140	5 794	3,151	8 945
		MISCELLANEOUS STORAGE TANKS AND PUMPS		1,230 00 TN	-	-		3,321	137,058	74,523	211,581
		FIRE WATER STORAGE TANK, 350 000 GAL		37 00 TN	-	-		100	4,123	2,242	6,365
		DEMINERALIZED WATER TANK, 500,000 GAL		50 00 TN	-	-		135	5 571	3,029	8,601
		SERVICE WATER STORAGE TANK, 350 000 GAL		37 00 TN	-	-		100	4,123	2 242	6,365
		CONDENSATE WATER TANK, 500,000 GAL		50 00 TN	-	-		135	5,571	3 029	8,601
		WASTE WATER SURGE TANKS, 2 @ 4,000,000 GAL EACH	137 FT DIA EACH	576 00 TN	-	-		1,166	48,137	26,174	74 311
		WATER TREATMENT DEMINERALIZATION & CHEMICAL TREATMENT EQUIPMENT		250 00 TN	-	-		506	20 893	11,360	32,253
		AQCS PDC		22 00 TN	-	-		45	1,839	1,000	2,838
		COAL PDC		6 00 TN	-	-		12	501	273	774
		CRUSHER HOUSE PDC		12 00 TN	-	-		24	1,003	545	1,548
		COOLING TOWER PDC		12 00 TN	-	-		24	1,003	545	1,548
		LIME UNLOADING AREA PDC		5 00 TN	-	-		10	418	227	645
		SCR		950 00 TN	-	-		1,924	79 393	43 169	122 562
		FLUE		600 00 TN	-	-		1,215	50 143	27,265	77 408
		MISCELLANEOUS EQUIPMENT		540 00 TN	-	-		1,094	45 129	24,538	69 667
		SPRAY DRYER ABSORBER		696 00 TN	-	-		1 409	58 166	31 627	89 793
		BURNERS AND COAL PIPE		175 00 TN	-	-		354	14,625	7 952	22,577
		WASTE WATER POND TREATMENT EQUIPMENT		60 00 TN	-	-		162	6 686	3 635	10,321

Estimate No 31562C
Project No A13351 021
Estimate Date 8/19/20
Prep/Rev/Appr GA/BA/BA

AEP
TURK STATION
DEMOLITION STUDY UPDATE

Sargent & Lundy

Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
	10 31 00	MECHANICAL EQUIPMENT									
		CONDENSER		589 00 TN	-	-		1,193	49,224	26 765	75,989
		CIRCULATING WATER SYSTEM EQUIPMENT		350 00 TN	-	-		709	29,250	15,904	45,154
		COOLING TOWER		2,400,000 00 CF	-	-		4,800	198,096	107,712	305,808
		MECHANICAL EQUIPMENT						66,560	2 810,209	1 470,954	4 281,163
	10 34 00	HVAC									
		MAIN BUILDING HVAC		1 00 LT	-	-		1,500	61,905	33,660	95,565
		HVAC						1,500	61,905	33,660	95,565
	10 35 00	PIPING									
		PIPING, VALVES AND HANGERS	BOILER AND TURBINE PLANT	1 600 00 TN	-	-		3,240	133,715	72,706	206,420
		CIRCULATING WATER SYSTEM EQUIPMENT PIPING AND TUNNELS		1 00 LT	-	-		803	33,119	18 008	51,127
		PIPING, VALVES AND HANGERS	BOP	126 00 TN	-	-		255	10,530	5,726	16,256
		HYDRANTS		1 00 LS	-	-		188	8,494	8,531	17,025
		PIPING						4,485	185,858	104,971	290,828
	10 41 00	ELECTRICAL EQUIPMENT									
		TRANSFORMERS	MPT AND AUXILIARY TRANSFORMER	473 00 TN	-	-		1,264	52,159	28 361	80,520
		LIGHT FIXTURE		1,000 00 EA	-	-		400	16 508	8,976	25 484
		OUTDOOR LIGHT POLE / FIXTURE		180 00 EA	-	-		270	11 143	6 059	17,202
		MISCELLANEOUS ELECTRICAL EQUIPMENT		1,032 00 TN	-	-		2,758	113,802	61,878	175,681
		ELECTRICAL EQUIPMENT						4,691	193,612	105,274	298,887
	10 42 00	RACEWAY, CABLE TRAY, & CONDUIT									
		ALUMINUM CONDUIT		285 50 TN	-	-		1,856	76,587	41 643	118 230
		ALUMINUM CABLE TRAY		52 50 TN	-	-		315	13,000	7,069	20,069
		RACEWAY, CABLE TRAY, & CONDUIT						2,171	89 587	48,712	138,298
	10 43 00	CABLE									
		COPPER WIRE		202 00 TN	-	-		2 020	83,365	45,329	128,694
		CABLE						2 020	83 365	45 329	128,694
		WHOLE PLANT DEMOLITION			**2,880,000**			**145,012**	**6,262,923**	**3,415,747**	**12,558,670**
18 00 00		**SCRAP VALUE**									
	18 10 00	CARBON STEEL									
		CARBON STEEL		-33 544 00 TN	-	(5,568 304)	-				(5,568,304)
		CARBON STEEL	RAILROAD TRACK RAIL	-902 00 TN	-	(149 732)	-				(149,732)
		CARBON STEEL	REAGENT PREPARATION BUILDING	-296 00 TN	-	(49 136)	-				(49,136)
		CARBON STEEL	SIDING	-64 00 TN	-	(10 624)	-			-	(10,624)
		CARBON STEEL	CONDENSER SHELL	-242 00 TN	-	(40,172)	-			-	(40,172)
		CARBON STEEL				(5,817,968)					(5,817,968)
	18 20 00	STAINLESS STEEL									
		STAINLESS STEEL	CHIMNEY LINER, 21 5' DIA X 25' TALL X 1/2" WALL	-17 00 TN	-	(14,110)	-				(14,110)
		STAINLESS STEEL	CONDENSER TUBES	-347 00 TN	-	(288,010)	-				(288 010)
		STAINLESS STEEL				(302,120)					(302,120)
	18 30 00	COPPER									
		SOLID COPPER	ISO PHASE	-2 00 TN	-	(8 540)	-				(8,540)
		#1 INSULATED COPPER WIRE 65%		-202 00 TN	-	(454,298)	-	0			(454,298)
		COPPER				(462,838)		0			(462,838)
	18 50 00	ALUMINUM									
		ALUMINUM	ISO PHASE BUS ENCLOSURE AND CONDUCTOR	-31 00 TN	-	(28,830)	-		-	-	(28,830)
		ALUMINUM	ALUMINUM CABLE TRAY	-52 50 TN	-	(48,825)	-		-	-	(48 825)
		ALUMINUM	ALUMINUM CONDUIT	-285 50 TN	-	(265,515)	-		-	-	(265,515)
		ALUMINUM				(343,170)					(343,170)
		SCRAP VALUE				**(6,926,096)**		**0**			**(6,926,096)**
21.00.00		**CIVIL WORK**									
	21 17 00	EARTHWORK EXCAVATION									

Estimate No 31562C
Project No A13351 021
Estimate Date 8/19/20
Prep/Rev/Appr GA/BA/BA

AEP
TURK STATION
DEMOLITION STUDY UPDATE

Sargent & Lundy

Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
	21 17 00	EARTHWORK, EXCAVATION									
		EXCAVATE CONCRETE CHIMNEY DEBRIS AND DISPOSE ONSITE		4 007 00 CY	-	-		601	28,941	10,320	39,261
		MASS EXCAVATION	LEVEL BERMS AND DIKES	5,000 00 CY	-	-		200	9,158		9,158
		EARTHWORK, EXCAVATION						801	38 099	10,320	48,419
	21 21 00	MASS FILL									
		CUT & FILL, CLAY, 1500 FT HAUL, 14 CY SCRAPER DOZER-SPREAD, COMPACTION, WATERING TRUCK	COVER DISTURBED AREAS OF SITE AND PONDS WITH 2FT OF SOIL	945,413 00 CY	-	-		61,452	2,813,880		2 813 880
		CUT & FILL, CLAY, 1500 FT HAUL, 14 CY SCRAPER, DOZER-SPREAD, COMPACTION, WATERING TRUCK	NEW 3 FT BERM ADDITION TO 3 SIDES OF MAKEUP WATER POND	2 167 00 CY	-	-		141	6,450		6,450
		MASS FILL						61,593	2,820 330		2,820,330
	21 47 00	LANDSCAPING									
		HYDRO SEEDING		293 00 AC	631,708	-	-		-	-	631,708
		LANDSCAPING			631,708						631 708
	21 52 00	WASTE DISPOSAL									
		DISPOSAL AND TRANSPORTATION FEE	BUILDING DEBRIS	3,000 00 CY	54,000	-				-	54,000
		WASTE DISPOSAL			54 000						54,000
		CIVIL WORK			**686,708**			**62,394**	**2,858,428**	**10,320**	**3,554,456**
22.00.00		**CONCRETE**									
	22 13 00	CONCRETE									
		FLOWABLE FILL, 1500 PSI	FILL 24" DIA X 55' INTAKE WELL	900 00 CY	-	-	85,500	450	18 230	5,688	109 418
		CONCRETE					85,500	450	18 230	5 688	109 418
		CONCRETE					**85,500**	**450**	**18,230**	**5,688**	**109,418**

J.R. Welsh Plant Units 1-3

CONCEPTUAL DEMOLITION COST ESTIMATE

Prepared for:
Southwestern Electric Power Company (Owner)
and American Electric Power

Project No. A13351.021
August 19, 2020
Revision 0

55 East Monroe Street
Chicago, IL 60603-5780 USA

Revision Number	Date	Purpose	Prepared By	Reviewed By	Approved By	Pages Affected
A	7/27/20	Comments	G. Amen	B. Andric		All
0	8/19/20	Use	G. Amen	B. Andric	A. Redd	All

TABLE OF CONTENTS

Section		Page
1.0	INTRODUCTION	1
2.0	COST ESTIMATE SUMMARY	1
3.0	TECHNICAL BASIS	2
4.0	COMMERCIAL BASIS	3
4.1	General Information	3
4.2	Quantities/Material Cost	3
4.3	Construction Labor Wages	3
4.3.1	Labor Work Schedule and Incentives	3
4.3.2	General Conditions Costs	3
4.4	Scrap Value	4
4.5	Indirect Costs	4
4.6	Escalation	4
4.7	Contingency	4
4.8	Assumptions	5
5.0	REFERENCES	6

EXHIBIT	DESCRIPTION
1	Conceptual Demolition Cost Estimate No. 24260F

1.0 INTRODUCTION

The J.R. Welsh Plant located near Daingerfield, Texas in Titus County, is owned and operated by Southwestern Electric Power Company (SWEPCO), a subsidiary of American Electric Power (AEP). The plant consists of three (3) coal fired generating units with a total generating capacity of 1,674 megawatts. The units were placed in operation as follows:

Unit 1 1977
Unit 2 1980 (Retired in place)
Unit 3 1982

Sargent & Lundy (S&L) previously prepared a Conceptual Demolition Cost Estimate for J. R. Welsh Plant Units 1-3 in 2012 and 2016. AEP recently contracted S&L to update the previously prepared cost estimate to 2020 pricing levels. The objective of the conceptual demolition cost estimate is to determine the gross demolition costs for J. R. Welsh Plant Units 1-3 (including gross salvage credits and any other benefits). The cost estimate considers the demolition/dismantlement methodology which complies with current OSHA rules and regulations.

2.0 COST ESTIMATE SUMMARY

Conceptual Demolition Cost Estimate No 24260F, was prepared and is included as Exhibit 1. The cost estimate is structured into a code of accounts as identified in Table 2-1.

Table 2-1
Cost Estimate Code of Accounts

Account Number	Description
10	Demolition Costs
18	Scrap Value Costs
21	Civil Work Costs
22	Concrete Work Costs
90, 91, 92	General Conditions Costs
93	Indirect Costs
94	Contingency Costs
96	Escalation Costs

The results of the cost estimate are provided in Table 2-2 below:

Table 2-2
Cost Estimate Results Summary

Description	Total Cost
Demolition Direct Cost	$ 24,584,393
Scrap Value	($ 17,333,224)
General Conditions Cost	$ 8,249,500
Indirect Cost	$ 3,283,400
Contingency Cost	$ 5,345,000
Total Project Cost	$ 24,129,069

3.0 TECHNICAL BASIS

The scope of dismantlement includes the complete J. R. Welsh Plant Units 1-3 generating facility and plant common services associated with the unit. Common facilities include:

- Roadways
- Coal and Lime Receiving Systems
- Outlying Structures
- Main and Auxiliary Power Transformers

The following are excluded from the scope of the conceptual demolition cost estimate:

- Cooling Lake Removal
- Ash Pond Removal
- Asbestos Removal
- Switchyard Demolition and Access Roads to the Switchyard

The following items were included in the current cost estimate and were not included in the 2016 cost estimate:

- Removal of the Unit 2 precipitator
- Removal of the Unit 2 fly ash silo
- Removal of the cooling tower

Revisions to the plant facilities that would affect the current cost estimate were provided by plant personnel through correspondence.

4.0 COMMERCIAL BASIS

4.1 General Information

The Conceptual Demolition Cost Estimate prepared for the J.W. Welsh Plant is a conceptual estimate of the cost to dismantle J. R. Welsh Plant Units 1-3. Costs were calculated for (1) demolition of existing plant structures and equipment and associated site restoration costs, (2) scrap value of metals, (3) associated indirect costs, and (4) contingency. All units used in the cost estimate are U.S. Standard and all costs are in US Dollars (2020 levels). A one (1) year demolition schedule is anticipated not including asbestos removal (to be performed prior to start of demolition work). All units will be demolished at the same time.

4.2 Quantities/Material Cost

Quantities of pieces of equipment and/or bulk material commodities used in this cost estimate were intended to be reasonable and representative of projects of this type. Material quantities were estimated from the site plot plan and other drawings and data provided by AEP and Plant Personnel.

4.3 Construction Labor Wages

Craft labor rates (Craft Hourly Rate) for the cost estimate are based on the prevailing wages for Dallas, Texas as published in "R.S. Means Labor Rates for the Construction Industry", 2020 Edition. These prevailing rates are representative of union or non-union rates, whichever is prevailing in the area. Costs have been added to cover social security, workmen's compensation, federal and state unemployment insurance. The resulting burdened craft rates were then used to develop typical crew rates applicable to the task being performed.

4.3.1 Labor Work Schedule and Incentives

The estimate assumed a 5x8 work week. No other labor incentives are included.

4.3.2 General Conditions Costs

Allowances were included in the cost estimate as direct costs as noted for the following:

- Labor Supervision
- Construction Management
- Field Office Expenses
- Safety
- Temporary Facilities
- Mobilization / Demobilization
- Legal Expenses / Claims
- Small Tools & Consumables
- General Liability Insurance
- Construction Equipment Mobilization / Demobilization
- Freight on Material

- Contractor's General and Administrative Costs
- Contractor's Profit

4.4 Scrap Value

The value of scrap is based on "Scrap Metals Market Watch" as published in the July 2020 Edition of "American Recycler News" (www.americanrecycler.com) using Zone 3 (USA Southwest). The values obtained are delivered prices to the recycler. Transportation cost to the recycler is assumed @ 30 $/ton resulting in the values below:

- Carbon Steel Value @ 166 $/ton
- Copper Value @ 4,270 $/ton
- #1 Insulated Copper Wire 65% @ 2249 $/ton
- Aluminum @ 930 $/ton

Note: 1 Ton = 2,000 Lbs

4.5 Indirect Costs

Allowances were included in the cost estimate as indirect costs as noted for the following:

- Engineering, Procurement and Project Services: None included.
- Construction Management Support: None included.
- Owners Cost: Included as 10.0% of the total direct labor and material cost. Owners Costs include owner project engineering, administration and construction management, permits and fees, legal expenses, taxes, etc.

4.6 Escalation

No allowance for escalation was included in the cost estimate.

4.7 Contingency

We believe the available information and inputs to the demolition cost estimate warrant a 15% contingency. However, we have applied a 10% contingency in the current demolition cost estimate because the Commission ordered the use of a 10% contingency in SWEPCO's 2016 rate case (Docket No. 46449). Allowances were included in the cost estimate as contingency as noted for the following:

- Scrap Value: Included as a 10.0% reduction in the salvage value resulting in a total net reduction in the salvage value. The contingency assumes a potential drop in salvage value thus increasing the project cost.
- Material: Included as 10.0% of the total material cost.
- Labor: Included as 10.0% of the total labor cost.
- Indirect: Included as 10.0% of the total indirect cost.

4.8 Assumptions

The following assumptions apply to the cost estimate.

- All chemicals will be removed by the Owner prior to demolition, from the facilities to be demolished.
- All coal and fuel oil will be consumed prior to demolition.
- All electrical equipment and wiring is de-energized prior to start of dismantlement.
- No extraordinary environmental costs for demolition have been included.
- Handling, on-site and off-site disposal of hazardous materials would be performed in compliance with methods approved by Owner.
- Switchyards within the plant boundaries are not part of the scope, neither are access roads to these facilities. Fences and gates needed to protect the switchyard will be left in place.
- All items above grade and to a depth of two (2) feet will be demolished. Any other items buried more than two (2) feet will remain in place. All foundations are removed and buried on site.
- Underground piping, conduit and cable ducts will be abandoned in place.
- Underground piping larger than four (4) feet diameter will be filled with sand or slurry and capped at the ends to prevent collapse. Non-metal pipe will be collapsed.
- All demolished materials are considered debris, except for organic combustibles and non-embedded metals which have scrap value.
- The basis for salvage estimating is for scrap value only. No resale of equipment or material is included.
- Disturbed areas will be buried under two (2) feet of topsoil, mulched and seeded with grass – no other landscaping is included.
- All borrow material is assumed to be from onsite sources.
- Debris not suitable for burial is to be disposed of off-site. Assumed distance to final disposal is within a five (5) mile haul.
- The entire weight of transformers and generators are valued using only the carbon steel scrap value rate. No additional value is considered for the copper metal content. This is based on information supplied by scrap dealers. Additional cost to the scrap dealer to separate the different metals is offset by the increased value of the copper.
- Concrete / Brick chimney(s) will be demolished using Top-To-Bottom, Piece-Meal, Non-Explosive demolition method.

5.0 REFERENCES

Drawings utilized in the preparation of the demolition cost estimate are identified in Table 5-1.

Table 5-1
Reference Drawings

Document Number	Revision	Title
M-1	Rev A	Site Development
M-2	Rev A	Property Development
M-3	Rev A	Plant Development
M-4 Sht 1	Rev A	General Arrangement Grade Floor Plan
M-4, Sht 2	Rev A	General Arrangement Grade Floor Plan
M-5	Rev A	General Arrangement Mezzanine Floor Plan
M-6, Sht 1	Rev A	General Arrangement Main Floor Plan
M-6, Sht 2	Rev A	General Arrangements Precipitators Plan
507000	Rev 0	ACI/FF/Chimney Project, Site Plot Plan
507001	Rev 0	ACI/FF/Chimney Project, General Arrangement

EXHIBIT 1
J. R. Welsh Plant Units 1-3
Conceptual Demolition Cost Estimate No. 24260F

AEP / SWEPCO
WELSCH STATION
DEMOLITION COST ESTIMATE

Estimator	GA
Labor rate table	20TXDAL
Project No.	A13351 021
Estimate Date	8/19/20
Reviewed By	BA
Approved By	BA
Estimate No.	24260F

Estimate No 24260F
Project No A13351 021
Estimate Date 8/19/20
Prep/Rev/App GA/BA/BA

AEP / SWEPCO
WELSCH STATION
DEMOLITION COST ESTIMATE

Area	Description	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
A	UNIT 1		(6 933,843)		87 415	4,049,868	1,882 125	(2 110)
B	UNIT 2		(4,328,208)		59 099	2,7 11,280	1 270,505	(346,423)
C	UNIT 3		(5 909 560)		88 452	4 191,888	1,904,166	96,494
D	COMMON FACILITIES	3,496 526	(1,161,612)	368,030	56 685	2,656,130	2,144,135	7 503,209
	TOTAL DIRECT	3,496,526	(17,333,224)	368,030	291,650	13,518,906	7,200,931	7,251,170

Estimate No 24260F
Project No A13351 021
Estimate Date 8/19 20
Prep/Rev/App GA/BA/BA

AEP / SWEPCO
WELSCH STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Estimate Totals

Description	Amount	Totals	Hours
Labor	13 518,906		291 650
Material	368 030		
Subcontract	3 496,526		
Construction Equipment	7 200 931		
Scrap Value	(17,333 224)		
	7 251,169	7 251 169	
General Conditions			
Additional Labor Costs			
90-1 Labor Supervision	811 100		
90-2 Show-up Time	270 400		
90-3 Cost Due To OT 5-10's			
90-4 Cost Due To OT 8-10 s			
90-5 Per Diem			
Site Overheads			
91-1 Construction Management	1,460 000		
91-2 Field Office Expenses	321 200		
91-3 Material&Quality Control			
91-4 Site Services			
91-5 Safety	288 400		
91-6 Temporary Facilities	219 400		
91-7 Temporary Utilities			
91-8 Mobilization/Demob	231 300		
91-9 Legal Expenses/Claims	34 200		
Other Construction Indirects			
92-1 Small Tools & Consumables	146 000		
92-2 Scaffolding			
92-3 General Liability Insur	146 000		
92-4 Constr Equip Mob/Demob	72 000		
92-5 Freight on Material	18 400		
92-6 Freight on Scrap			
92-7 Sales Tax			
92-8 Contractors G&A	1 742 300		
92-9 Contractors Profit	2,488 800		
	8 249 500	15 500 669	
Project Indirect Costs			
93-1 Engineering Services			
93-2 CM Support			
93-3 Start-Up/Commissioning			
93-4 Start Up/Spare Parts			
93-5 Excess Liability Insur			
93-6 Sales Tax On Indirects			
93-7 Owners Cost	3 283 400		
93-8 EPC Fee			
	3 283 400	18 784 069	
Contingency			
94-1 Contingency on Const Eq	849 700		
94-3 Contingency on Material	45 200		
94-4 Contingency on Labor	2 038 800		
94-5 Contingency on Subcontr	349,700		
94-6 Contingency on Scrap	1 733 300		
94-7 Contingency on Indirect	328 300		
	5 345,000	24 129 069	
Escalation			
96-1 Escalation on Const Equip			
96-3 Escalation on Material			
96-4 Escalation on Labor			
96-5 Escalation on Subcontract			
96-6 Escalation on Scrap			
96-7 Escalation on Indirects			
		24 129 069	
98 Interest During Constr			
		24 129 069	
Total		**24,129,069**	

Estimate No 24260F
Project No A13351 021
Estimate Date 8/19/20
Prep/Rev/Appr GA/BA/BA

AEP / SWEPCO
WELSCH STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Area	Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
A			**UNIT 1**									
	10 00 00		WHOLE PLANT DEMOLITION									
		10 22 00	CONCRETE									
			BUILDING/EQUIPMENT FOUNDATION/PAD	FABRIC FILTER	2,100 00 CY	-	-		2 363	116,873	51,172	168,045
			BUILDING/EQUIPMENT FOUNDATION/PAD	BYPRODUCT HANDLING SYSTEM	1,191 00 CY	-	-		1,340	66 284	29 022	95 305
			BUILDING/EQUIPMENT FOUNDATION/PAD	NEW DUCTWORK AND SUPPORTS	2,200 00 CY	-	-		2 475	122 438	53 609	176 047
			BUILDING/EQUIPMENT FOUNDATION/PAD	ACI SILO AND STAIR TOWER	230 00 CY	-	-		259	12,800	5,605	18,405
			BUILDING/EQUIPMENT FOUNDATION/PAD	DRAFT EQUIPMENT	915 00 CY	-	-		1,029	50,923	22,296	73 219
			BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION FIRE WALLS PIERS CURBS AND BASIN	230 00 CY	-	-		259	12,800	5,605	18 405
			ELEVATED CONCRETE FLOORS STAIRS ROOFS		1 080 00 CY	-	-		647	32 003	14 012	46 015
			MAIN POWER BLOCK FOUNDATION 250 LB/CY		3,700 00 CY	-	-		3 130	154,851	67 800	222 651
			TURBINE PEDESTAL		2 300 00 CY	-	-		4 140	204 806	89 672	294,478
			PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF	BOILER ROOM	33 480 00 SF	-	-		502	23 855	15 749	39 603
			PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF	TURBINE ROOM MACHINE SHOP, WATER TREATMENT AREA	16,480 00 SF	-	-		247	11,742	7 752	19,494
			PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF	CONTROL ROOM	4,000 00 SF	-	-		60	2,850	1 882	4,732
			PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF	AIR HEATER ROOM	1,377 00 SF	-	-		21	981	648	1,629
			CONCRETE						16 471	813 206	384 823	1,178,029
		10 23 00	STEEL									
			STRUCTURAL GIRT AND GALLERY STEEL	INCLUDES COAL SILOS AND BUNKERS	5,760 00 TN	-	-		5 852	273 823	94,571	368,393
			STEEL						5,852	273,823	94,571	368,393
		10 24 00	ARCHITECTURAL									
			BUILDING	BY PRODUCT ELECTRICAL BUILDING	25 217 00 CF	-	-		76	3 412	2 067	5,479
			METAL SIDING		39,360 00 SF	-	-		236	11 218	7,406	18,624
			MASONRY WALLS		2 203 00 SF	-	-		18	795	481	1 276
			ARCHITECTURAL						329	15 424	9,954	25,379
		10 25 00	CONCRETE CHIMNEY & STACK									
			STEEL STACK, 10 FT DIA X 76 FT TALL		30 00 TN	-	-		61	2 594	1 363	3,957
			CONCRETE CHIMNEY & STACK						61	2,594	1 363	3,957
		10 26 00	MISCELLANEOUS STRUCTURAL ITEM									
			ELEVATOR		1 00 EA	-	-		150	6,405	3 366	9,771
			MISCELLANEOUS STRUCTURAL ITEM						150	6 405	3 366	9,771
		10 31 00	MECHANICAL EQUIPMENT									
			MAIN BOILER AND APPURTENANCES INCL ID FD FANS AND MOTORS		10 000 00 TN	-	-		20 250	947 498	435,983	1 383,480
			STEAM TURBINE GENERATOR		1,150 00 TN	-	-		2 329	99,438	52 257	151 695
			FLUES AND DUCTS INCL BREACHING		2 000 00 TN	-	-		5 400	252,666	116,262	368,928
			FLUES AND DUCTS INCL BREACHING	AIR QUALITY PROJECT	1,742 00 TN	-	-		4 703	220 072	101,264	321 336
			PRECIPITATOR		5 500 00 TN	-	-		11,138	521 124	239 790	760 914
			FABRIC FILTER	AIR QUALITY PROJECT	1,487 00 TN	-	-		3 011	140 893	64 831	205,723
			ASH HANDLING EQUIPMENT		100 00 TN	-			270	11,529	6 059	17,588
			CONVEYORS, TRUSSES, BENTS, EQUIPMENT, RECLAIM EQUIPMENT		70 00 TN	-			189	8 070	4 241	12,311
			FEEDWATER SYSTEM DEAERATING EQUIPMENT		150 00 TN	-	-		304	12,970	6 816	19 786
			TANKS AND SILOS	MISCELLANEOUS SMALL TANKS	52 00 TN	-	-		140	5 995	3 151	9,146
			WATER TREATMENT DEMINERALIZATION & CHEMICAL TREATMENT EQUIPMENT		250 00 TN	-	-		506	21,617	11,360	32,977
			MISCELLANEOUS EQUIPMENT	INCLUDING TURBINE ROOM OVERHEAD CRANE	540 00 TN	-	-		1,094	46 692	24 538	71,231
			CEMS SHELTER	AIR QUALITY PROJECT	2 70 TN	-	-		5	233	123	356
			FLY ASH SILO		90 00 TN	-	-		243	10,376	5 453	15 829
			BY-PRODUCT SILO SUPPORT STRUCTURE STAIR TOWER	AIR QUALITY PROJECT	314 00 TN	-	-		848	36 201	19 025	55 226
			CONDENSER		410 00 TN	-	-		830	35,452	18,631	54 082
			STEEL STACK, 10 FT DIA X 76 FT TALL		30 00 TN	-	-		61	2,594	1,363	3 957
			CIRCULATING WATER SYSTEM EQUIPMENT		350 00 TN	-	-		709	30 264	15,904	46 168
			MECHANICAL EQUIPMENT						52,030	2,403 684	1,127 051	3 530,734
		10 34 00	HVAC									
			MAIN BUILDING HVAC		1 00 LT	-	-		1,500	64 050	33 660	97 710
			HVAC						1,500	64,050	33,660	97 710
		10 35 00	PIPING									

Estimate No 24260F
Project No A13351 021
Estimate Date 8/19/20
Prep/Rev/Appr GA/BA/BA

AEP / SWEPCO
WELSCH STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Area	Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
		10 35 00	PIPING									
			PIPING VALVES AND HANGERS	BOILER AND TURBINE PLANT	1,600 00 TN	-	-		3,240	138,348	72,706	211,054
			PIPING, VALVES AND HANGERS	BOP	126 00 TN	-	-		255	10 895	5 726	16 620
			CIRCULATING WATER SYSTEM EQUIPMENT PIPING AND TUNNELS		1 00 LT	-	-		803	34 267	18,008	52 275
			PIPING						4,298	183,510	96,439	279,949
		10 41 00	ELECTRICAL EQUIPMENT									
			LIGHT FIXTURE		300 00 EA	-	-		120	4,952	2,693	7,645
			MISCELLANEOUS ELECTRICAL EQUIPMENT		397 00 TN	-	-		1,061	45 295	23,804	69,099
			TRANSFORMERS		308 00 TN	-	-		823	35 141	18 468	53 609
			MISCELLANEOUSE ELECTRICAL EQUIPMENT	AIR QUALITY PROJECT	27 60 TN	-	-		74	3,149	1 655	4 804
			ELECTRICAL EQUIPMENT						2,078	88,538	46,619	135,157
		10 42 00	RACEWAY, CABLE TRAY, & CONDUIT									
			CONDUIT		204 00 TN	-	-		1,326	56,620	29,755	86,376
			CABLE TRAY		204 00 TN	-	-		1,224	52 265	27 467	79,731
			ALUMINUM CABLE TRAY	AIR QUALITY PROJECT	24 90 TN	-	-		149	6,379	3,353	9 732
			RACEWAY, CABLE TRAY & CONDUIT						2,699	115 264	60 575	175,839
		10 43 00	CABLE									
			COPPER WIRE / CABLE		195 00 TN	-	-		1 950	83 265	43 758	127 023
			CABLE						1,950	83,265	43,758	127 023
			WHOLE PLANT DEMOLITION						87 418	4,049 763	1,882 179	5 931,941
	18 00 00		SCRAP VALUE									
		18 10 00	CARBON STEEL									
			CARBON STEEL	STEEL SIDING	-19 20 TN	-	(3,187)	-	0	0	0	(3,187)
			CARBON STEEL		-32 894 00 TN	-	(5 460 404)	-	-3	(154)	(53)	(5 460 611)
			CARBON STEEL				(5 463,591)		-3	(154)	(53)	(5,463,798)
		18 30 00	COPPER									
			#1 INSULATED COPPER WIRE 65%		-195 00 TN	-	(438 555)	-	0	(1)	0	(438 556)
			SOLID COPPER	ISO PHASE	2 00 TN	-	(8,540)	-				(8,540)
			COPPER				(447 095)		0	(1)	0	(447,096)
		18 50 00	ALUMINUM									
			ALUMINUM	AIR QUALITY PROJECT	-24 90 TN	-	(23 157)	-		-	-	(23 157)
			ALUMINUM				(23,157)					(23,157)
			SCRAP VALUE				(5,933,843)		-3	(155)	(54)	(5,934 052)
			A UNIT 1				**(5,933,843)**		**87,415**	**4,049,608**	**1,882,125**	**(2,110)**
B			**UNIT 2**									
	10 00 00		WHOLE PLANT DEMOLITION									
		10 22 00	CONCRETE									
			BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION FIRE WALLS PIERS CURBS AND BASIN	230 00 CY	-	-		259	12 800	5 605	18 405
			ELEVATED CONCRETE FLOORS, STAIRS, ROOFS		1,080 00 CY	-	-		647	32,003	14,012	46 015
			MAIN POWER BLOCK FOUNDATION 250 LB/CY		3 700 00 CY	-	-		3,130	154,851	67,800	222,651
			TURBINE PEDESTAL		2 300 00 CY	-	-		4,140	204 806	89,672	294 478
			PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF	BOILER ROOM	33,480 00 SF	-	-		502	23,855	15 749	39 603
			PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF	TURBINE ROOM, MACHINE SHOP, WATER TREATMENT AREA	16,480 00 SF		-		247	11,742	7 752	19 494
			PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF	AIR HEATER ROOM	1,377 00 SF	-	-		21	981	648	1,629
			CONCRETE						8 946	441 038	201 238	642,276
		10 23 00	STEEL									
			STRUCTURAL, GIRT AND GALLERY STEEL	INCLUDES COAL SILOS AND BUNKERS	5 490 00 TN	-	-		5 578	260 987	90,138	351,125
			STEEL						5,578	260,987	90 138	351 125
		10 24 00	ARCHITECTURAL									
			METAL SIDING		39 360 00 SF	-	-		236	11,218	7,406	18,624
			MASONRY WALLS		2,203 00 SF	-	-		18	795	481	1 276
			ARCHITECTURAL						254	12 012	7,887	19,900
		10 25 00	CONCRETE CHIMNEY & STACK									
			STEEL STACK, 10 FT DIA X 76 FT TALL		30 00 TN	-	-		61	2 594	1 363	3 957

Estimate No 24260F
Project No A13351 021
Estimate Date 8/19/20
Prep/Rev/Appr GA/BA/BA

AEP / SWEPCO
WELSCH STATION
DEMOLITION COST ESTIMATE

Gargiulo & Lunny

Area	Group	Phase	Description	Notes	Quantity		Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
			CONCRETE CHIMNEY & STACK							61	2,594	1 363	3 957
		10 26 00	MISCELLANEOUS STRUCTURAL ITEM										
			ELEVATOR		1 00	EA	-	-		150	6 405	3,366	9,771
			MISCELLANEOUS STRUCTURAL ITEM							150	6 405	3 366	9,771
		10 31 00	MECHANICAL EQUIPMENT										
			MAIN BOILER AND APPURTENANCES INCL ID, FD FANS AND MOTORS		10 000 00	TN	-	-		20 250	947,498	435,983	1 383 480
			STEAM TURBINE GENERATOR		1 150 00	TN	-	-		2,329	99,438	52,257	151,695
			FLUES AND DUCTS INCL BREACHING		2,000 00	TN	-	-		5 400	252 666	116,262	368,928
			PRECIPITATOR	REMOVED	0 00	TN	-	-	0		0	0	0
			ASH HANDLING EQUIPMENT	REMOVED	0 00	TN	-	-	0		0	0	0
			CONVEYORS, TRUSSES, BENTS EQUIPMENT RECLAIM EQUIPMENT		70 00	TN	-	-		189	8 070	4 241	12,311
			FEEDWATER SYSTEM DEAERATING EQUIPMENT		150 00	TN	-	-		304	12,970	6 816	19 786
			TANKS AND SILOS	MISCELLANEOUS SMALL TANKS	52 00	TN	-	-		140	5,995	3,151	9,146
			WATER TREATMENT DEMINERALIZATION & CHEMICAL TREATMENT EQUIPMENT		250 00	TN	-	-		506	21,617	11,360	32,977
			MISCELLANEOUS EQUIPMENT	INCLUDING TURBINE ROOM OVERHEAD CRANE	540 00	TN	-	-		1,094	46 692	24,538	71,231
			FLY ASH SILO	REMOVED	0 00	TN	-	-	0		0	0	0
			CONDENSER		410 00	TN	-	-		830	35 452	18 631	54 082
			STEEL STACK, 10 FT DIA X 76 FT TALL		30 00	TN	-	-		61	2 594	1,363	3,957
			CIRCULATING WATER SYSTEM EQUIPMENT		350 00	TN	-	-		709	30,264	15 904	46,168
			MECHANICAL EQUIPMENT							31,811	1,463,255	690,506	2,153,762
		10 34 00	HVAC										
			MAIN BUILDING HVAC		1 00	LT	-	-		1,500	64 050	33,660	97 710
			HVAC							1,500	64 050	33 660	97,710
		10 35 00	PIPING										
			PIPING, VALVES AND HANGERS	BOILER AND TURBINE PLANT	1,600 00	TN	-	-		3 240	138 348	72,706	211,054
			CIRCULATING WATER SYSTEM EQUIPMENT PIPING AND TUNNELS		1 00	LT	-	-		803	34 267	18 008	52 275
			PIPING VALVES AND HANGERS	BOP	126 00	TN	-	-		255	10 895	5,726	16 620
			PIPING							4,298	183,510	96,439	279 949
		10 41 00	ELECTRICAL EQUIPMENT										
			LIGHT FIXTURE		300 00	EA	-	-		120	4 952	2,693	7,645
			MISCELLANEOUS ELECTRICAL EQUIPMENT		397 00	TN	-	-		1 061	45,295	23 804	69 099
			TRANSFORMERS		308 00	TN	-	-		823	35 141	18 468	53 609
			ELECTRICAL EQUIPMENT							2,004	85,389	44,964	130,353
		10 42 00	RACEWAY, CABLE TRAY & CONDUIT										
			CONDUIT		204 00	TN	-	-		1,326	56,620	29,755	86 376
			CABLE TRAY		204 00	TN	-	-		1,224	52 265	27 467	79 731
			RACEWAY, CABLE TRAY, & CONDUIT							2 550	108 885	57 222	166,107
		10 43 00	CABLE										
			COPPER WIRE / CABLE		195 00	TN	-	-		1,950	83,255	43,758	127,023
			CABLE							1,950	83,255	43,758	127,023
			WHOLE PLANT DEMOLITION							59,101	2,711 390	1,270 543	3,981,933
	18 00 00		SCRAP VALUE										
		18 10 00	CARBON STEEL										
			CARBON STEEL		-23,361 00	TN	-	(3,877 926)	-	-2	(109)	(38)	(3 878 073)
			CARBON STEEL	STEEL SIDING	-19 20	TN	-	(3 187)	-	0	0	0	(3 187)
			CARBON STEEL					(3 881,113)		-2	(109)	(38)	(3,881 260)
		18 30 00	COPPER										
			#1 INSULATED COPPER WIRE 65%		-195 00	TN	-	(438 555)	-	0	(1)	0	(438 556)
			SOLID COPPER	ISO PHASE	-2 00	TN	-	(8 540)	-				(8 540)
			COPPER					(447 095)		0	(1)	0	(447,096)
			SCRAP VALUE					(4,328 208)		2	(110)	(38)	(4 328,357)
			B UNIT 2					**(4,328,208)**		**59,099**	**2,711,280**	**1,270,505**	**(346,423)**
C			**UNIT 3**										
	10 00 00		WHOLE PLANT DEMOLITION										
		10 22 00	CONCRETE										
			BUILDING/EQUIPMENT FOUNDATION/PAD	COOLING TOWER BASIN	2,050 00	CY	-	-		2 306	114,090	49,953	164 044

Estimate No 24260F
Project No A13351 021
Estimate Date 8/19/20
Prep/Rev/Appr GA/BA/BA

AEP / SWEPCO
WELSCH STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Area	Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
		10 22 00	CONCRETE									
			BUILDING/EQUIPMENT FOUNDATION/PAD	FABRIC FILTER	2 100 00 CY	-	-		2,363	116 873	51 172	168 045
			BUILDING/EQUIPMENT FOUNDATION/PAD	BYPRODUCT HANDLING SYSTEM	1 191 00 CY	-	-		1 340	66 284	29 022	95 305
			BUILDING/EQUIPMENT FOUNDATION/PAD	NEW DUCTWORK AND SUPPORTS	1,450 00 CY	-	-		1 631	80,698	35 333	116,031
			BUILDING/EQUIPMENT FOUNDATION/PAD	ACI SILO AND STAIR TOWER	230 00 CY	-	-		259	12 800	5 605	18 405
			BUILDING/EQUIPMENT FOUNDATION/PAD	DRAFT EQUIPMENT	915 00 CY	-	-		1,029	50 923	22,296	73 219
			BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION, FIRE WALLS, PIERS CURBS, AND BASIN	230 00 CY	-	-		259	12 800	5 605	18,405
			ELEVATED CONCRETE FLOORS, STAIRS, ROOFS		1,080 00 CY	-	-		647	32 003	14,012	46 015
			MAIN POWER BLOCK FOUNDATION 250 LB/CY		3 700 00 CY	-	-		3,130	154,651	67 800	222,651
			TURBINE PEDESTAL		2,300 00 CY	-	-		4 140	204 806	89 672	294 478
			PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF	BOILER ROOM	33 480 00 SF	-	-		502	23 855	15,749	39,603
			PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF	TURBINE ROOM MACHINE SHOP WATER TREATMENT AREA	16 480 00 SF	-	-		247	11,742	7 752	19,494
			PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF	AIR HEATER ROOM	1 377 00 SF	-	-		21	981	648	1 629
			CONCRETE						17,874	882,706	394,619	1 277,325
		10 23 00	STEEL									
			STRUCTURAL, GIRT AND GALLERY STEEL	INCLUDES COAL SILOS AND BUNKERS	5,760 00 TN	-	-		5,852	273 823	94,571	368 393
			STEEL						5,852	273 823	94,571	368,393
		10 24 00	ARCHITECTURAL									
			BUILDING	BY PRODUCT ELECTRICAL BUILDING	25,217 00 CF	-	-		76	3 412	2 067	5 479
			METAL SIDING		39,360 00 SF	-	-		236	11 218	7,406	18 624
			MASONRY WALLS		2 203 00 SF	-	-		18	795	481	1,276
			MASONRY WALLS		2 203 00 SF	-	-		18	795	481	1 276
			ARCHITECTURAL						347	16,219	10,436	26 655
		10 25 00	CONCRETE CHIMNEY & STACK									
			STEEL STACK 10 FT DIA X 76 FT TALL		30 00 TN	-	-		61	2 594	1,363	3 957
			CONCRETE CHIMNEY & STACK						61	2,594	1,363	3,957
		10 26 00	MISCELLANEOUS STRUCTURAL ITEM									
			ELEVATOR		1 00 EA	-	-		150	6,405	3,366	9 771
			MISCELLANEOUS STRUCTURAL ITEM						150	6 405	3,366	9 771
		10 31 00	MECHANICAL EQUIPMENT									
			MAIN BOILER AND APPURTENANCES INCL ID, FD FANS AND MOTORS		10 000 00 TN	-	-		20 250	947,498	435 983	1 383 480
			STEAM TURBINE GENERATOR		1,150 00 TN	-	-		2 329	99 438	52 257	151 695
			FLUES AND DUCTS INCL BREACHING		2 000 00 TN	-	-		5 400	252,666	116,262	368 928
			FLUES AND DUCTS INCL BREACHING	AIR QUALITY PROJECT	1,593 00 TN	-	-		4,301	201 248	92 603	293 851
			PRECIPITATOR		5 500 00 TN	-	-		11,138	521,124	239,790	760,914
			FABRIC FILTER	AIR QUALITY PROJECT	1 487 00 TN	-	-		3 011	140,893	64,831	205,723
			MATERIAL HANDLING EQUIPMENT		100 00 TN	-	-		270	11,529	6 059	17,588
			CONVEYORS, TRUSSES, BENTS, EQUIPMENT, RECLAIM EQUIPMENT		70 00 TN	-	-		189	8,070	4 241	12,311
			FEEDWATER SYSTEM DEAERATING EQUIPMENT		150 00 TN	-			304	12 970	6,816	19 786
			TANKS AND SILOS	MISCELLANEOUS SMALL TANKS	52 00 TN	-	-		140	5,995	3,151	9,146
			WATER TREATMENT DEMINERALIZATION & CHEMICAL TREATMENT EQUIPMENT		250 00 TN	-	-		506	21 617	11,360	32 977
			MISCELLANEOUS EQUIPMENT	INCLUDING TURBINE ROOM OVERHEAD CRANE	540 00 TN	-	-		1,094	46 692	24 538	71 231
			CEMS SHELTER	AIR QUALITY PROJECT	2 70 TN	-	-		5	233	123	356
			FLY ASH SILO		90 00 TN	-	-		243	10,376	5,453	15 829
			BY PRODUCT SILO SUPPORT STRUCTURE, STAIR TOWER	AIR QUALITY PROJECT	314 00 TN	-	-		848	36 201	19 025	55 226
			CONDENSER		410 00 TN	-	-		830	35 452	18,631	54,082
			STEEL STACK 10 FT DIA X 76 FT TALL		30 00 TN	-	-		61	2 594	1,363	3 957
			CIRCULATING WATER SYSTEM EQUIPMENT		350 00 TN	-	-		709	30,264	15,904	46 168
			COOLING TOWER	REMOVED	0 00 CF	-	-	0		0	0	0
			MECHANICAL EQUIPMENT						51 627	2,384 860	1,118 389	3,503,249
		10 34 00	HVAC									
			MAIN BUILDING HVAC		1 00 LT	-	-		1 500	64 050	33 660	97 710
			HVAC						1,500	64,050	33,660	97 710
		10 35 00	PIPING									
			PIPING, VALVES AND HANGERS	BOILER AND TURBINE PLANT	1,600 00 TN	-			3,240	138,348	72,706	211 054
			CIRCULATING WATER SYSTEM EQUIPMENT PIPING AND TUNNELS		1 00 LT	-	-		803	34 267	18 008	52,275

Estimate No 24260F
Project No A13351 021
Estimate Date 8/19/20
Prep/Rev/Appr GA/BA/BA

AEP / SWEPCO
WELSCH STATION
DEMOLITION COST ESTIMATE

Bargent & Lundy

Area	Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
		10 35 00	PIPING									
			PIPING, VALVES AND HANGERS	BOP	126 00 TN	-	-		255	10 895	5 726	16 620
			PIPING						4,298	183,510	96,439	279,949
		10 41 00	ELECTRICAL EQUIPMENT									
			LIGHT FIXTURE		300 00 EA	-	-		120	4,952	2,693	7,645
			MISCELLANEOUS ELECTRICAL EQUIPMENT		397 00 TN	-	-		1,061	45 295	23 804	69 099
			TRANSFORMERS		308 00 TN	-	-		823	35 141	18,468	53,609
			MISCELLANEOUSE ELECTRICAL EQUIPMENT	AIR QUALITY PROJECT	37 60 TN	-	-		100	4 290	2,254	6 544
			ELECTRICAL EQUIPMENT						2 104	89 679	47,219	136,898
		10 42 00	RACEWAY CABLE TRAY, & CONDUIT									
			CONDUIT		204 00 TN	-	-		1 326	56 620	29,755	86 376
			CABLE TRAY		204 00 TN	-	-		1,224	52 265	27,467	79 731
			ALUMINUM CABLE TRAY	AIR QUALITY PROJECT	23 60 TN	-	-		142	6 046	3,178	9 224
			RACEWAY, CABLE TRAY, & CONDUIT						2,692	114 931	60 400	175 331
		10 43 00	CABLE									
			COPPER WIRE / CABLE		195 00 TN	-	-		1 950	83,265	43 758	127 023
			CABLE						1,950	83,265	43,758	127,023
			WHOLE PLANT DEMOLITION						88 455	4,102 042	1,904 219	6,006,261
	18 00 00		SCRAP VALUE									
		18 10 00	CARBON STEEL									
			CARBON STEEL		-32 755 00 TN	-	(5,437,330)	-	-3	(153)	(53)	(5 437,536)
			CARBON STEEL	STEEL SIDING	-19 20 TN	-	(3,187)	-	0	0	0	(3 187)
			CARBON STEEL				(5,440,517)		-3	(153)	(53)	(5,440 724)
		18 30 00	COPPER									
			#1 INSULATED COPPER WIRE 65%		-195 00 TN	-	(438 555)	-				(438 555)
			SOLID COPPER	ISO PHASE	-2 00 TN	-	(8 540)	-				(8,540)
			COPPER				(447 095)					(447,095)
		18 50 00	ALUMINUM									
			ALUMINUM	AIR QUALITY PROJECT	-23 60 TN	-	(21 948)	-		-	-	(21,948)
			ALUMINUM				(21,948)					(21,948)
			SCRAP VALUE				(5 909,560)		-3	(153)	(53)	(5 909,767)
			C UNIT 3				**(5,909,560)**		**88,452**	**4,101,888**	**1,904,166**	**96,494**
D			**COMMON FACILITIES**									
	10 00 00		WHOLE PLANT DEMOLITION									
		10 21 00	CIVIL WORK									
			FENCES AND GATES	ABANDON IN PLACE	LF	-	-					
			REMOVE RAILROAD TRACK RAIL, TIES SPREAD BALLAST		25,590 00 TF	-	-		5 758	283,224	261,978	545,201
			PAVED SURFACES		20,000 00 SY	-	-		2,400	118 056	109 200	227 256
			CIVIL WORK						8,158	401 280	371,178	772,457
		10 22 00	CONCRETE									
			BUILDING/EQUIPMENT FOUNDATION/PAD	MISCELLANEOUS EQUIPMENT PADS AND SITE BUILDING FOUNDATIONS	1 750 00 CY	-	-		1 969	97 394	42 643	140 037
			BUILDING/EQUIPMENT FOUNDATION/PAD	TANK FOUNDATIONS AND CONCRETE BERMS	1 620 00 CY	-	-		1,823	90 159	39 475	129 634
			BUILDING/EQUIPMENT FOUNDATION/PAD	INTAKE STRUCTURE	147 00 CY	-	-		165	8,181	3,582	11,763
			BUILDING/EQUIPMENT FOUNDATION/PAD	WATER SOFTENER TANKS	200 00 CY	-	-		225	11,131	4,874	16 004
			BUILDING/EQUIPMENT FOUNDATION/PAD	FUEL / MATERIAL HANDLING EQUIPMENT	1,765 00 CY	-	-		1,986	98,229	43,009	141 236
			BUILDING/EQUIPMENT FOUNDATION/PAD	PIPE RACK FOR NEW AIR QUALITY EQUIPMENT	620 00 CY	-	-		698	34,505	15,108	49 613
			BUILDING/EQUIPMENT FOUNDATION/PAD	AIR COMPRESSOR BUILDING	610 00 CY	-	-		686	33 949	14,864	48 813
			BUILDING/EQUIPMENT FOUNDATION/PAD	FABRIC FILTER ELECTRICAL EQUIPMENT BUILDING	150 00 CY	-	-		169	8 348	3 655	12 003
			BUILDING/EQUIPMENT FOUNDATION/PAD	ACI BLOWER BUILDING	235 00 CY	-	-		264	13,079	5,726	18 805
			BUILDING/EQUIPMENT FOUNDATION/PAD	WELDING AND FAB SHOP	645 00 CY	-	-		726	35,897	15,717	51,614
			BUILDING/EQUIPMENT FOUNDATION/PAD	NEW WAREHOUSE	537 00 CY	-	-		604	29 886	13,085	42 971
			BUILDING/EQUIPMENT FOUNDATION/PAD	ACI TRUCK UNLOADING	75 00 CY	-	-		84	4,174	1,828	6,002
			BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION, FIRE WALLS, PIERS, CURBS AND BASIN	200 00 CY	-	-		225	11 131	4,874	16,004
			CURBS		2 000 00 LF	-	-		24	1,187	520	1 707
			WALKWAYS		120 00 CY	-	-		63	3 117	1 365	4 481
			DISCHARGE CANAL		9 723 00 CY	-	-		486	24,050	10,530	34 580
			DISCHARGE OUTFALL STRUCTURE		1,165 00 CY	-	-		874	43,224	18,925	62 150

Estimate No 24260F
Project No A13351 021
Estimate Date 8/19/20
Prep/Rev/Appr GA/BA/BA

AEP / SWEPCO
WELSCH STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Area	Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
			CONCRETE						11,070	547,640	239,779	787,420
		10 23 00	STEEL									
			STRUCTURAL GIRT AND GALLERY STEEL	PIPE RACK	620 00 TN		-		630	29 474	10 180	39 653
			LOAD CHIMNEY LINER STEEL PLATE PIECES, ALREADY CUT BY DEMOLITION CONTRACTOR INTO CONTAINER		589 00 TN	-	-		295	12,902	4 759	17 661
			STEEL						924	42 376	14 939	57,315
		10 24 00	ARCHITECTURAL									
			BUILDING	WAREHOUSE	42,000 00 CF	-	-		126	5 683	3 442	9,125
			BUILDING	WATER TREATMENT, CHEMICAL FEED CHLORINATION BLD	138,600 00 CF	-	-		416	18,753	11 360	30,112
			BUILDING	OLD ADMINSTRATION BUILDING	240 000 00 CF	-	-		720	32,472	19,670	52 142
			BUILDING	NORTH WAREHOUSE QUONSET HUT	67,200 00 CF	-	-		202	9 092	5 508	14 600
			BUILDING	NORTHEAST WAREHOUSE	49 000 00 CF	-	-		147	6,630	4 016	10 646
			BUILDING	NORTHEAST GAS BOTTLE STORAGE	20 000 00 CF	-	-		60	2 706	1 639	4,345
			BUILDING	NEW ADMINISTRATION BUILDING	456 000 00 CF	-	-		1 368	61,697	37,374	99 071
			BUILDING	TRACTOR MAINTENANCE BUILDING	113 400 00 CF	-	-		340	15 343	9 294	24 637
			BUILDING	PRECIPITATOR ELECTRICAL BUILDING	86,400 00 CF	-	-		259	11 690	7 081	18,771
			BUILDING	COAL YARD MAINTENANCE BUILDING	44 800 00 CF	-	-		134	6,061	3,672	9,733
			BUILDING	CAR DUMPER BUILDING	169,940 00 CF	-	-		510	22 993	13 928	36 921
			BUILDING	MISCELLANEOUS SMALL SIZE BUILDINGS	20 000 00 CF	-	-		60	2,706	1 639	4,345
			BUILDING	SCREEN HOUSE	172 570 00 CF	-	-		518	23,349	14,144	37 493
			BUILDING	AIR COMPRESSOR BUILDING	350,579 00 CF	-	-		1 052	47 433	28 733	76 167
			BUILDING	ACI ELECTRICAL BUILDING	24 750 00 CF	-	-		74	3 349	2 029	5 377
			BUILDING	ACI BLOWER BUILDING	65 398 00 CF	-	-		196	8 848	5,360	14 208
			BUILDING	WELDING AND SHOP	290 000 00 CF	-	-		870	39,237	23,768	63 005
			BUILDING	NEW WAREHOUSE	326,250 00 CF	-	-		979	44,142	26 739	70 881
			ARCHITECTURAL						8,031	362,183	219,398	581,580
		10 25 00	CONCRETE CHIMNEY & STACK									
			CONCRETE CHIMNEY 2 STEEL LINERS DEMOLITION TOP-TO-BOTTOM PIECE-MEAL, NON-EXPLOSIVE METHOD	511 FT TALL X 63 FT BASE	1 00 LS	3 300,000	-					3 300 000
			CONCRETE CHIMNEY & STACK			3,300,000						3,300 000
		10 26 00	MISCELLANEOUS STRUCTURAL ITEM									
			MISCELLANEOUS SMALL OBSTACLE REMOVAL FROM SITE		1 00 LT	-	-		2,000	85,400	44,880	130,280
			MISCELLANEOUS STRUCTURAL ITEM						2,000	85 400	44,880	130,280
		10 31 00	MECHANICAL EQUIPMENT									
			CONVEYORS, TRUSSES, BENTS EQUIPMENT RECLAIM EQUIPMENT	INCLUDING CRUSHER HOUSE	2 091 00 TN	-	-		5 646	241 071	126 690	367,761
			FUEL OIL STORAGE TANK, 921,000 GAL		95 00 TN	-	-		257	10,953	5 756	16 708
			MISCELLANEOUS SMALL TANKS, AND PUMPS		2,460 00 TN	-	-		6,642	283 613	149 046	432 660
			MISCELLANEOUS FUEL OIL EQUIPMENT		70 00 TN	-	-		187	7 987	4,197	12,184
			MECHANICAL EQUIPMENT						12 731	543 624	285 689	829,313
		10.35 00	PIPING									
			HYDRANTS		1 00 LS	-	-		188	9,223	8 531	17 754
			PIPING						188	9,223	8,531	17,754
		10 41 00	ELECTRICAL EQUIPMENT									
			MISCELLANEOUSE ELECTRICAL EQUIPMENT	AIR QUALITY PROJECT	62 00 TN	-	-		166	7 074	3 718	10 791
			OUTDOOR LIGHTING		1 00 LT	-	-		750	32 025	16 830	48 855
			ELECTRICAL EQUIPMENT						916	39,099	20 548	59,646
		10 42 00	RACEWAY CABLE TRAY, & CONDUIT									
			CABLE TRAY		20 00 TN	-	-		120	5,124	2,693	7 817
			ALUMINUM CABLE TRAY	AIR QUALITY PROJECT	9 40 TN	-	-		56	2,408	1 266	3,674
			RACEWAY CABLE TRAY, & CONDUIT						176	7,532	3,958	11,491
			WHOLE PLANT DEMOLITION			3,300 000			44,194	2,038,357	1 208,900	6,547 257
18 00 00			SCRAP VALUE									
		18 10 00	CARBON STEEL									
			CARBON STEEL		-6 007 00 TN	-	(997 162)	-	-1	(28)	(10)	(997 200)
			CARBON STEEL	RAILROAD TRACK	-938 00 TN	-	(155 708)	-	0	(4)	(2)	(155,714)
			CARBON STEEL				(1,152,870)		-1	(32)	(11)	(1,152,914)
		18 50 00	ALUMINUM									

Estimate No 24260F
Project No A13351 021
Estimate Date 8/19/20
Prop/Rev/Appr GA/BA/BA

AEP / SWEPCO
WELSCH STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

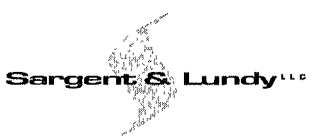
Area	Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
		18 50 00	ALUMINUM									
			ALUMINUM	AIR QUALITY PROJECT	-9 40 TN	-	(8,742)	-		-	-	(8 742)
			ALUMINUM				(8,742)					(8,742)
			SCRAP VALUE				(1,161 612)		-1	(32)	(11)	(1 161,656)
	21 00 00		CIVIL WORK									
		21 17 00	EARTHWORK, EXCAVATION									
			FOUNDATION EXCAVATION, USING 1 CY BACKHOE	EXCAVATE 2 FT DEEP OILY SAND / SOIL IN TAKE FARM AREA	1,445 00 CY	-	-		217	11 980	3,722	15 701
			EXCAVATE CONCRETE CHIMNEY DEBRIS AND DISPOSE ONSITE		6 078 00 CY				912	43,898	15 654	59 552
			MASS EXCAVATION	LEVEL BERMS AND DIKES	5 000 00 CY	-	-		200	10 300	18 912	29 212
			EARTHWORK EXCAVATION						1,328	66,178	38,287	104 466
		21 21 00	MASS FILL									
			CUT & FILL CLAY 1500 FT HAUL, 14 CY SCRAPER, DOZER SPREAD COMPACTION WATERING TRUCK	COVER DISTURBED AREAS OF SITE AND PONDS WITH 2FT OF SOIL	141 949 00 CY	-	-		9 227	475,174	872,475	1,347 650
			MASS FILL						9 227	475 174	872 475	1,347,650
		21 47 00	LANDSCAPING									
			HYDRO SEEDING		46 00 AC	99 176	-	-		-	-	99 176
			LANDSCAPING			99,176						99,176
		21 52 00	WASTE DISPOSAL									
			DISPOSAL AND TRANSPORTATION FEE	BUILDING DEBRIS	3,000 00 CY	54 000	-				-	54 000
			DISPOSAL AND TRANSPORTATION FEE	EXCAVATE 2 FT DEEP OILY SAND / SOIL IN TAKE FARM AREA	1 445 00 CY	43 350	-				-	43,350
			WASTE DISPOSAL			97,350						97,350
			CIVIL WORK			196,526			10 555	541 352	910 763	1,648,641
	22 00 00		CONCRETE									
		22 13 00	CONCRETE									
			FLOWABLE FILL, 1500 PSI	INTAKE	2 374 00 CY	-	-	225 530	1 187	46,851	15,004	287 385
			FLOWABLE FILL 1500 PSI	DISCHARGE	1 500 00 CY	-	-	142 500	750	29 603	9 480	181 583
			CONCRETE					368,030	1 937	76,453	24,484	468,967
			CONCRETE					368 030	1 937	76 453	24,484	468 967
			D COMMON FACILITIES			**3,496,526**	**(1,161,612)**	**368,030**	**56,685**	**2,656,130**	**2,144,135**	**7,503,209**

Wilkes Plant Units 1-3

CONCEPTUAL DEMOLITION COST ESTIMATE

Prepared for:
Southwestern Electric Power Company(Owner)
and American Electric Power

Project No. A13351.021
August 17, 2020
Revision 0



55 East Monroe Street
Chicago, IL 60603-5780 USA

Revision Number	Date	Purpose	Prepared By	Reviewed By	Approved By	Pages Affected
A	8/10/20	Comments	G. Amen	B. Andric		All
0	8/17/20	Use	G. Amen	B. Andric	A. Redd	All

TABLE OF CONTENTS

Section		Page
1.0	INTRODUCTION	1
2.0	COST ESTIMATE SUMMARY	1
3.0	TECHNICAL BASIS	2
4.0	COMMERCIAL BASIS	2
4.1	General Information	2
4.2	Quantities/Material Cost	3
4.3	Construction Labor Wages	3
4.3.1	Labor Work Schedule and Incentives	3
4.3.2	General Conditions Costs	3
4.4	Scrap Value	4
4.5	Indirect Costs	4
4.6	Escalation	4
4.7	Contingency	4
4.8	Assumptions	5
5.0	REFERENCES	6

EXHIBIT	DESCRIPTION
1	Conceptual Demolition Cost Estimate No. 24264F

1.0 INTRODUCTION

The Wilkes Plant located near Wilkes, Texas in Marion County is owned and operated by Southwestern Electric Power Company (SWEPCO), a subsidiary of American Electric Power (AEP). The plant consists of three (3) gas fired generating units with a total generating capacity of 882 megawatts. The Units were placed in operation as follows:

Unit 1 1964
Unit 2 1970
Unit 3 1971

Sargent & Lundy (S&L) previously prepared a Conceptual Demolition Cost Estimate for Wilkes Plant Units 1-3 in 2012 and 2016. AEP recently contracted S&L to update the previously prepared cost estimate to 2020 pricing levels. The objective of the conceptual demolition cost estimate is to determine the gross demolition costs for Wilkes Plant Units 1-3 (including gross salvage credits and any other benefits). The cost estimate considers the demolition/dismantlement methodology which complies with current OSHA rules and regulations.

2.0 COST ESTIMATE SUMMARY

Conceptual Demolition Cost Estimate No 24264F, was prepared and is included as Exhibit 1. The cost estimate is structured into a code of accounts as identified in Table 2-1.

Table 2-1
Cost Estimate Code of Accounts

Account Number	Description
10	Demolition Costs
18	Scrap Value Costs
21	Civil Work Costs
22	Concrete Work Costs
90, 91, 92	General Conditions Costs
93	Indirect Costs
94	Contingency Costs
96	Escalation Costs

The results of the cost estimate are provided in Table 2-2 below:

Table 2-2
Cost Estimate Results Summary

Description	Total Cost
Demolition Direct Cost	$ 9,175,214
Scrap Value	($ 8,760,352)
General Conditions Cost	$ 3,491,900
Indirect Cost	$ 1,266,700
Contingency Cost	$ 2,269,300
Total Project Cost	$ 7,442,762

3.0 TECHNICAL BASIS

The scope of dismantlement includes the complete Wilkes Plant Units 1-3 generating facility. Common facilities include:

- Roads
- Intake and Discharge Structures
- Equipment and Tanks

The following are excluded from the scope of the conceptual demolition cost estimate:

- Cooling Lake
- Asbestos Removal
- Switchyard

The following items were included in the current cost estimate and were not included in the 2016 cost estimate:

- Sodium Hypochlorite Tank foundation and containment

Revisions to the plant facilities that would affect the current cost estimate were provided by plant personnel through correspondence

4.0 COMMERCIAL BASIS

4.1 General Information

The Conceptual Demolition Cost Estimate prepared for the Wilkes Plant is a conceptual estimate of the cost to dismantle Wilkes Plant Units 1-3. Costs were calculated for (1) demolition of existing plant structures and equipment and associated site restoration costs, (2) scrap value of metals, (3) associated indirect costs, and (4) contingency. All units used in the cost estimate are U.S. Standard and all costs are in US Dollars (2020 levels). A one (1) year demolition schedule is anticipated not including asbestos

removal (to be performed prior to start of demolition work). All units will be demolished at the same time.

4.2 Quantities/Material Cost

Quantities of pieces of equipment and/or bulk material commodities used in this cost estimate were intended to be reasonable and representative of projects of this type. Material quantities were estimated from the site plot plan and other drawings and data provided by AEP and Plant Personnel.

4.3 Construction Labor Wages

Craft labor rates (Craft Hourly Rate) for the cost estimate are based on the prevailing wages for Dallas, Texas as published in "R.S. Means Labor Rates for the Construction Industry", 2020 Edition. These prevailing rates are representative of union or non-union rates, whichever is prevailing in the area. Costs have been added to cover social security, workmen's compensation, federal and state unemployment insurance. The resulting burdened craft rates were then used to develop typical crew rates applicable to the task being performed

4.3.1 Labor Work Schedule and Incentives

The estimate assumed a 5x8 work week. No other labor incentives are included.

4.3.2 General Conditions Costs

Allowances were included in the cost estimate as direct costs as noted for the following:

- Labor Supervision
- Construction Management
- Field Office Expenses
- Safety
- Temporary Facilities
- Mobilization / Demobilization
- Legal Expenses / Claims
- Small Tools & Consumables
- General Liability Insurance
- Construction Equipment Mobilization / Demobilization
- Freight on Material
- Contractor's General and Administrative Costs
- Contractor's Profit

4.4 Scrap Value

The value of scrap is based on "Scrap Metals Market Watch" as published in the July 2020 Edition of "American Recycler News" (www.americanrecycler.com) using Zone 3 (USA Southwest). The values obtained are delivered prices to the recycler. Transportation cost to the recycler is assumed @ 30 $/ton resulting in the values below:

- Carbon Steel Value @ 166 $/ton
- Copper Value @ 4,270 $/ton
- #1 Insulated Copper Wire 65% @ 2249 $/ton

Note: 1 Ton = 2,000 Lbs

4.5 Indirect Costs

Allowances were included in the cost estimate as indirect costs as noted for the following:

- Engineering, Procurement and Project Services: None included.
- Construction Management Support: None included.
- Owners Cost: Included as 10.0% of the total direct labor and material cost. Owners Costs include owner project engineering, administration and construction management, permits and fees, legal expenses, taxes, etc.

4.6 Escalation

No allowance for escalation was included in the cost estimate.

4.7 Contingency

We believe the available information and inputs to the demolition cost estimate warrant a 15% contingency. However, we have applied a 10% contingency in the current demolition cost estimate because the Commission ordered the use of a 10% contingency in SWEPCO's 2016 rate case (Docket No. 46449). Allowances were included in the cost estimate as contingency as noted for the following:

- Scrap Value: Included as a 10.0% reduction in the salvage value resulting in a total net reduction in the salvage value. The contingency assumes a potential drop in salvage value thus increasing the project cost.
- Material: Included as 10.0% of the total material cost.
- Labor: Included as 10.0% of the total labor cost.
- Indirect: Included as 10.0% of the total indirect cost.

4.8 Assumptions

The following assumptions apply to the cost estimate.

- All chemicals will be removed by the Owner prior to demolition, from the facilities to be demolished.
- All fuel oil will be consumed prior to demolition.
- All electrical equipment and wiring is de-energized prior to start of dismantlement.
- No extraordinary environmental costs for demolition have been included.
- PCB's are not present on site.
- Handling, on-site and off-site disposal of hazardous materials would be performed in compliance with methods approved by Owner.
- Switchyards within the plant boundaries are not part of the scope, neither are access roads to these facilities. Fences and gates needed to protect the switchyard will be left in place.
- The existing Cooling Lake is to be left in place.
- All items above grade and to a depth of two (2) feet will be demolished. Any other items buried more than two (2) feet will remain in place. All foundations are removed and buried on site.
- Underground piping, conduit and cable ducts will be abandoned in place.
- Underground piping larger than four (4) feet diameter will be filled with sand or slurry and capped at the ends to prevent collapse. Non-metal pipe will be collapsed.
- All demolished materials are considered debris, except for organic combustibles and non-embedded metals which have scrap value.
- The basis for salvage estimating is for scrap value only. No resale of equipment or material is included.
- Disturbed areas will be buried under two (2) feet of topsoil mulched and seeded with grass – no other landscaping is included.
- All borrow material is assumed to be from onsite sources.
- Debris not suitable for burial is to be disposed of off-site. Assumed distance to final disposal is within a five (5) mile haul.
- The entire weight of transformers and generators are valued using only the carbon steel scrap value rate. No additional value is considered for the copper metal content. This is based on information supplied by scrap dealers. Additional cost to the scrap dealer to separate the different metals is offset by the increased value of the copper.

5.0 REFERENCES

Drawings utilized in the preparation of the demolition cost estimate are identified in Table 5-1.

Table 5-1
Reference Drawings

Document Number	Revision/Date	Title
B-110	11/30/62	Floor Loading Diagrams Unit 1
M-1	11/30/62	Property Plat
M-4	11/30/62	General Arrangement Mezzanine Floor Unit 1
M-5	Rev A	General Arrangement Grade Floor Unit 1
M-6	11/30/62	General Arrangement Cross Section Unit 1
M-7	11/30/62	General Arrangement Misc Plans Unit 1
M-75	11/30/62	Turbine and Generator Dismantling Layout Unit 1
SL-2632		Engineering Data Unit 2
M-3	11/30/62	General Arrangement Maine Floor Units 1 & 2
M-4	11/30/62	General Arrangement Mezzanine Floor Units 1 & 2
M-5	11/30/62	General Arrangement Grade Floor Units 1 & 2
M-6	11/30/62	General Arrangement Cross Section Unit 1
M-7	11/30/62	General Arrangement Misc Plans Units 1 & 2
M-145	4/15/68	General Arrangement Cross Section Unit 2
M-146	4/15/68	General Arrangement Cross Section Unit 2
M-147	4/15/68	General Arrangement Longitudinal Section Unit 2
M-210	4/17/68	Turbine and Generator Dismantling Layout Unit 2
M-211	4/17/68	Turbine and Generator Dismantling Layout Unit 2
SL-2646		Engineering Data Unit 3
M-1	Rev A	Property Plat
M-2	Rev A	Development Plan Unit 1, 2 & 3
M-300	10/5/70	General Arrangement Main Floor Units 1, 2 & 3
M-302	10/5/70	General Arrangement Grade Floor Units 1, 2 & 3
M-303	10/5/70	General Arrangement Misc Plans Units 2 & 3
M-304	10/5/70	General Arrangement Cross Section Unit 3
M-305	10/5/70	General Arrangement Cross Section Unit 3
M-306	10/5/70	General Arrangement Longitudinal Section Units 2&3
M-360	7/10/70	Turbine and Generator Dismantling Layout Unit 3
M-361	7/10/70	Turbine and Generator Dismantling Layout Unit 3

Document Number	Revision/Date	Title
D-HK0661-M21	Rev A	Cycle Sampling Equipment, Shelter Layout Plan
D-HK0661-M22	Rev A	Cycle Sampling Equipment, Shelter Layout Plan
D-HK0661-M23	Rev A	Cycle Sampling Equipment, Shelter Layout Plan
WPX-206	Rev.B	Office Building Additions Wilkes Power Plant

EXHIBIT 1
Wilkes Plant Units 1-3
Conceptual Demolition Cost Estimate No. 24264F

AEP SWEPCO
WILKES POWER STATION
DEMOLITION COST ESTIMATE

Estimator	GA
Labor rate table	20TXDAL
Project No.	A13351 021
Estimate Date	8/17/20
Reviewed By	BA
Approved By	BA
Estimate No.	24264F

Estimate No 24264F
Project No A13351 021
Estimate Date 8/17/20
Prep/Rev/App GA/BA/BA

AEP SWEPCO
WILKES POWER STATION
DEMOLITION COST ESTIMATE

Area	Description	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
A	UNIT 1		(1,794,494)	33 960	24 204	1 102,299	525 517	(133 619)
B	UNIT 2		(3 395,657)	51,870	43,086	1 964 053	930 942	(448,792)
C	UNIT 3		(3 488,063)	69,160	45,947	2 092,451	993 577	(324 875)
D	COMMON FACILITIES	335,094	(90,138)	54 720	12,701	602,917	419,556	1,322, 148
	TOTAL DIRECT	**335,094**	**(8,760,352)**	**208,810**	**126,938**	**5,761,719**	**2,869,591**	**414,863**

Estimate No 24264F
Project No A13351 021
Estimate Date 8/17/20
Prep/Rev/App GA/BA/BA

AEP SWEPCO
WILKES POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Estimate Totals

Description	Amount	Totals	Hours
Labor	5 761 719		125 938
Material	208 810		
Subcontract	335 094		
Construction Equipment	2 869 591		
Scrap Value	(8,760,352)		
	414,862	414 862	
General Conditions			
Additional Labor Costs			
90-1 Labor Supervision	345 700		
90-2 Show-up Time	115,200		
90-3 Cost Due To OT 5-10's			
90-4 Cost Due To OT 6 10's			
90-5 Per Diem			
Site Overheads			
91-1 Construction Management	622 300		
91-2 Field Office Expenses	138 900		
91-3 Material&Quality Control			
91-4 Site Services			
91-5 Safety	122 900		
91-6 Temporary Facilities	93 500		
91-7 Temporary Utilities			
91-8 Mobilization/Demob	98 600		
91-9 Legal Expenses/Claims	14 600		
Other Construction Indirects			
92-1 Small Tools & Consumables	62 200		
92-2 Scaffolding			
92-3 General Liability Insur	62 200		
92-4 Constr Equip Mob/Demob	28 700		
92-5 Freight on Material	10 400		
92-6 Freight on Scrap			
92-7 Sales Tax			
92-8 Contractors G&A	732 400		
92-9 Contractors Profit	1,046,300		
	3 491 900	3 906 762	
Project Indirect Costs			
93-1 Engineering Services			
93-2 CM Support			
93-3 Start-Up/Commissioning			
93-4 Start-Up/Spare Parts			
93-5 Excess Liability Insur			
93-6 Sales Tax On Indirects			
93-7 Owners Cost	1 266 700		
93-8 EPC Fee			
	1,266 700	5,173 462	
Contingency			
94-1 Contingency on Const Eq	338 600		
94-3 Contingency on Material	25 600		
94-4 Contingency on Labor	868 900		
94-5 Contingency on Subcontr	33 500		
94-6 Contingency on Scrap	876 000		
94-7 Contingency on Indirect	126,700		
	2 269,300	7,442 762	
Escalation			
96-1 Escalation on Const Equip			
96-3 Escalation on Material			
96-4 Escalation on Labor			
96-5 Escalation on Subcontract			
96-6 Escalation on Scrap			
96-7 Escalation on Indirects			
		7 442 762	
98 Interest During Constr			
		7 442 762	
Total		**7,442,762**	

Estimate No 24264F
Project No A13351 021
Estimate Date 8/17/20
Prep/Rev/Appr GA/BA/BA

AEP SWEPCO
WILKES POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Area	Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
A			UNIT 1									
	10 00 00		WHOLE PLANT DEMOLITION									
		10 22 00	CONCRETE									
			BUILDING/EQUIPMENT FOUNDATION/PAD	DRAFT EQUIPMENT	200 00 CY	-	-		225	11,131	4 874	16 004
			BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION FIRE WALLS, PIERS CURBS AND BASIN	86 00 CY	-	-		97	4 786	2 096	6 882
			MAIN POWER BLOCK FOUNDATION		1,702 00 CY	-	-		1 436	71,063	31 114	102 177
			ELEVATED CONCRETE FLOOR / ROOF		983 00 CY	-	-		589	29 129	12 754	41,883
			TURBINE PEDESTAL		1 219 00 CY	-	-		2 194	108,547	47,526	156 073
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	AUX BUILDING CONTROL HOUSE	4 800 00 SF	-	-		72	3,420	2,258	5 678
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	TURBINE ROOM MACHINE SHOP, WATER TREATMENT AREA	9 580 00 SF	-	-		144	6,826	4 506	11 332
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	AIR HEATER ROOM, MISCELLANEOUS	1 800 00 SF	-	-		27	1 283	847	2,129
			CONCRETE						4,784	236,184	105,375	342,159
		10 23 00	STEEL									
			STRUCTURAL GIRT AND GALLERY STEEL		1 178 00 TN	-	-		1,197	56 001	19 341	75,342
			STEEL						1,197	56,001	19 341	75,342
		10 24 00	ARCHITECTURAL									
			MASONRY WALLS		28,224 00 SF	-			226	10 183	6 169	16 352
			ARCHITECTURAL						226	10,183	6,169	16,352
		10 25 00	CONCRETE CHIMNEY & STACK									
			STEEL STACK	ON TOP OF BOILER	20 00 TN	-	-		41	1 729	909	2 638
			CONCRETE CHIMNEY & STACK						41	1,729	909	2 638
		10 26 00	MISCELLANEOUS STRUCTURAL ITEM									
			ELEVATOR		1 00 EA	-			150	6 405	3 366	9 771
			MISCELLANEOUS STRUCTURAL ITEM						150	6,405	3 366	9,771
		10 31 00	MECHANICAL EQUIPMENT									
			MAIN BOILER AND APPURTENANCES INCL ID, FD FANS AND MOTORS		2,951 00 TN	-	-		5 976	279 607	128 658	408 265
			STEAM TURBINE GENERATOR		556 00 TN	-	-		1,126	48 076	25 265	73 341
			FLUES AND DUCTS INCL BREACHING		615 00 TN	-	-		1,661	77 695	35 751	113 445
			FEEDWATER SYSTEM DEAERATING EQUIPMENT		123 00 TN	-	-		249	10 636	5 589	16 225
			MISCELLANEOUS SMALL TANKS		61 00 TN	-	-		165	7,033	3 696	10,729
			WATER TREATMENT DEMINERALIZATION & CHEMICAL TREATMENT EQUIPMENT		100 00 TN	-	-		203	8 647	4,544	13,191
			TURBINE ROOM OH CRANE, 50/10 TON		1 00 LS	-	-		188	8,773	3 030	11 803
			MISCELLANEOUS EQUIPMENT		159 00 TN	-	-		322	13 748	7 225	20 973
			MISCELLANEOUS EQUIPMENT	CYCLE SAMPLING SHELTER, NO FOUNDATION MOUNTED ON BOILER STEEL	9 00 TN	-			18	778	409	1,187
			MISCELLANEOUS EQUIPMENT	2 5 MW DIESEL GENERATOR	41 00 TN	-	-		83	3 545	1 863	5 408
			CONDENSER		356 00 TN	-	-		721	30 782	15,177	46 959
			CIRCULATING WATER SYSTEM EQUIPMENT		430 00 TN	-	-		871	37 181	19 540	56 721
			CIRCULATING WATER SYSTEM EQUIPMENT	20 TON GANTRY CRANE	30 00 TN	-	-		61	2,594	1 363	3 957
			MECHANICAL EQUIPMENT						11,642	529,095	253,110	782,205
		10 34 00	HVAC									
			MAIN BUILDING HVAC		1 00 LT	-	-		320	13 664	7 181	20 845
			HVAC						320	13,664	7,181	20,845
		10 35 00	PIPING									
			PIPING VALVES AND HANGERS	BOILER AND TURBINE PLANT	431 00 TN	-	-		873	37,267	19,585	56,853
			CIRCULATING WATER SYSTEM EQUIPMENT PIPING AND TUNNELS		1 00 LT	-	-		620	26 474	13 913	40 387
			PIPING, VALVES AND HANGERS	BOP	202 00 TN	-	-		409	17 466	9 179	26 646
			PIPING						1 902	81 208	42 677	123,885
		10 41 00	ELECTRICAL EQUIPMENT									
			TRANSFORMERS		140 00 TN	-	-		374	15 973	8,394	24 368
			LIGHT FIXTURE		300 00 EA	-	-		120	5,124	2,693	7,817
			MISCELLANEOUS ELECTRICAL EQUIPMENT		192 00 TN	-	-		513	21,906	11,512	33,418
			ELECTRICAL EQUIPMENT						1 007	43,003	22,599	65,603
		10 42 00	RACEWAY, CABLE TRAY & CONDUIT									
			CONDUIT		125 00 TN	-	-		813	34,694	18,233	52 926

Estimate No 24264F
Project No A13351 021
Estimate Date 8/17/20
Prep/Rev/Appr GA/BA/BA

AEP SWEPCO
WILKES POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Area	Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
		10 42 00	RACEWAY, CABLE TRAY, & CONDUIT									
			CABLE TRAY		125 00 TN	-	-		750	32,025	16,830	48 855
			RACEWAY, CABLE TRAY & CONDUIT						1,563	66,719	35,063	101,781
		10 43 00	CABLE									
			COPPER WIRE / CABLE		120 00 TN	-	-		1,200	51,240	26,928	78,168
			CABLE						1,200	51,240	26 928	78,168
			WHOLE PLANT DEMOLITION						24,030	1,095,431	523,317	1 618 748
	18 00 00		SCRAP VALUE									
		18.10 00	CARBON STEEL									
			CARBON STEEL		-7 844 00 TN	-	(1 302 104)	-				(1 302 104)
			CARBON STEEL				(1 302 104)					(1,302,104)
		18 30 00	COPPER									
			SOLID COPPER	ISO PHASE	-1 00 TN	-	(4 270)	-				(4,270)
			ADMIRALTY BRASS	CONDENSER TUBES	-64 00 TN	-	(218,240)	-				(218 240)
			#1 INSULATED COPPER WIRE 65%		-120 00 TN	-	(269 880)	-				(269 880)
			COPPER				(492,390)					(492 390)
			SCRAP VALUE				(1,794 494)					(1 794,494)
	22 00 00		CONCRETE									
		22.13 00	CONCRETE									
			FLOWABLE FILL, 1500 PSI	DISCHARGE CLOSURE, 2 - 48" DIAMETER BURIED PIPES	116 00 CY		-	11,020	58	2 289	733	14,042
			FLOWABLE FILL, 1500 PSI	INTAKE CLOSURE, 2 - 48" DIAMETER BURIED PIPES	232 00 CY	-	-	22 040	116	4,579	1,466	28,085
			CONCRETE					33 060	174	6 868	2 199	42 127
			CONCRETE					33,060	174	6,868	2,199	42 127
			A UNIT 1				**(1,794,494)**	**33,060**	**24,204**	**1,102,299**	**525,517**	**(133,619)**
B			**UNIT 2**									
	10 00 00		WHOLE PLANT DEMOLITION									
		10 22 00	CONCRETE									
			BUILDING/EQUIPMENT FOUNDATION/PAD	DRAFT EQUIPMENT	326 00 CY	-	-		367	18,143	7,944	26 087
			BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION FIRE WALLS PIERS CURBS, AND BASIN	371 00 CY	-	-		417	20 648	9 040	29,688
			MAIN POWER BLOCK FOUNDATION		1 669 00 CY	-	-		1 409	69 685	30 511	100 196
			ELEVATED CONCRETE FLOOR / ROOF		684 00 CY	-	-		410	20 269	8 874	29 143
			TURBINE PEDESTAL		1 303 00 CY	-	-		2 345	116 027	50 801	166 828
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	BOILER ROOM	3 976 00 SF	-			60	2 833	1 870	4 703
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	TURBINE ROOM, MACHINE SHOP, WATER TREATMENT AREA	9 230 00 SF	-	-		138	6 576	4 342	10,918
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	FD FAN HOUSE	4 400 00 SF	-	-		66	3,135	2,070	5,205
			CONCRETE						6 212	257,316	115,453	372,769
		10 23 00	STEEL									
			STRUCTURAL GIRT AND GALLERY STEEL		2,015 00 TN	-	-		2 047	95 790	33 083	128 874
			STEEL						2 047	95 790	33,083	128,874
		10 24 00	ARCHITECTURAL									
			MASONRY WALLS		18,744 00 SF	-	-		150	6 763	4 097	10 860
			ARCHITECTURAL						150	6,763	4,097	10,860
		10 25.00	CONCRETE CHIMNEY & STACK									
			STEEL STACK	216" DIA X 183' TALL	86 00 TN	-	-		174	7 436	3,908	11,344
			CONCRETE CHIMNEY & STACK						174	7,436	3,908	11 344
		10 26 00	MISCELLANEOUS STRUCTURAL ITEM									
			ELEVATOR		1 00 EA	-	-		134	5 722	3 007	8,729
			MISCELLANEOUS STRUCTURAL ITEM						134	5 722	3,007	8,729
		10 31 00	MECHANICAL EQUIPMENT									
			MAIN BOILER AND APPURTENANCES, INCL ID, FD FANS AND MOTORS		7 775 00 TN	-			15,744	736,679	338,976	1,075,656
			STEAM TURBINE GENERATOR		892 00 TN	-	-		1,806	77,129	40,533	117,662
			FLUES AND DUCTS INCL BREACHING		1 465 00 TN	-	-		3,956	185,078	85,162	270,240
			FEEDWATER SYSTEM DEAERATING EQUIPMENT		150 00 TN	-	-		304	12 970	6 816	19 786

Estimate No 24264F
Project No A13351.021
Estimate Date 8/17/20
Prep/Rev/Appr GA/BA/BA

AEP SWEPCO
WILKES POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Area	Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
		10 31 00	MECHANICAL EQUIPMENT									
			MISCELLANEOUS SMALL TANKS		96 00 TN	-	-		259	11 068	5 816	16 884
			TANKS AND SILOS	DEMIN WATER TANK, 60,000 GAL, 22' DIA X 24 TALL	14 00 TN	-	-		38	1 614	848	2,462
			WATER TREATMENT DEMINERALIZATION & CHEMICAL TREATMENT EQUIPMENT		147 00 TN	-	-		298	12,711	6,680	19 391
			TURBINE ROOM OH CRANE, 60/20 TON		1 00 LS	-	-		267	12,493	4,315	16 808
			MISCELLANEOUS EQUIPMENT		453 00 TN	-	-		917	39,170	20 585	59 755
			MISCELLANEOUS EQUIPMENT	2 5 MW DIESEL GENERATOR	41 00 TN	-	-		83	3 545	1 863	5 408
			CONDENSER		350 00 TN	-	-		709	30,264	15 904	46 168
			CIRCULATING WATER SYSTEM EQUIPMENT		302 00 TN	-	-		612	26 113	13 723	39,836
			CIRCULATING WATER SYSTEM EQUIPMENT	20 TON GANTRY CRANE	30 00 TN	-	-		61	2,594	1 363	3 957
			MECHANICAL EQUIPMENT						26,053	1,161 428	542,586	1,694,013
		10 34 00	HVAC									
			MAIN BUILDING HVAC		1 00 LT	-	-		1,125	48 038	25 245	73 283
			HVAC						1,125	48,038	25 245	73 283
		10 35 00	PIPING									
			PIPING, VALVES AND HANGERS	BOILER AND TURBINE PLANT	1,237 00 TN	-	-		2,505	106 960	56 211	163,171
			CIRCULATING WATER SYSTEM EQUIPMENT PIPING AND TUNNELS		1 00 LT	-	-		803	34 288	18 019	52,307
			PIPING, VALVES AND HANGERS	BOP	167 00 TN	-	-		338	14 440	7 589	22 029
			PIPING						3,646	155,688	81,818	237,507
		10 41 00	ELECTRICAL EQUIPMENT									
			TRANSFORMERS		223 00 TN	-	-		596	25 443	13,371	38,814
			LIGHT FIXTURE		500 00 EA	-	-		200	8,540	4,488	13 028
			MISCELLANEOUS ELECTRICAL EQUIPMENT		295 00 TN	-	-		788	33,658	17 688	51,346
			ELECTRICAL EQUIPMENT						1 584	67 641	35 547	103,188
		10 42 00	RACEWAY, CABLE TRAY, & CONDUIT									
			CONDUIT		167 00 TN	-	-		1 086	46 351	24 359	70 709
			CABLE TRAY		167 00 TN	-	-		1,002	42 785	22,485	65 270
			RACEWAY CABLE TRAY, & CONDUIT						2,088	89,136	46,844	135 980
		10 43 00	CABLE									
			COPPER WIRE / CABLE		160 00 TN	-	-		1,600	68 320	35,904	104 224
			CABLE						1,600	68 320	35,904	104,224
			WHOLE PLANT DEMOLITION						42 813	1 953 278	927 492	2,880 769
	18 00 00		SCRAP VALUE									
		18 10 00	CARBON STEEL									
			CARBON STEEL		-16 072 00 TN	-	(2,667 952)	-				(2,667,952)
			CARBON STEEL				(2,667,952)					(2,667,952)
		18 30 00	COPPER									
			SOLID COPPER	ISO PHASE	-1 50 TN	-	(6,405)	-				(6 405)
			ADMIRALTY BRASS	CONDENSER TUBES	-106 00 TN	-	(361 460)	-				(361,460)
			#1 INSULATED COPPER WIRE 65%		-160 00 TN	-	(359,840)	-				(359,840)
			COPPER				(727,705)					(727,705)
			SCRAP VALUE				(3,395,657)					(3,395 657)
	22 00 00		CONCRETE									
		22 13 00	CONCRETE									
			FLOWABLE FILL 1500 PSI	DISCHARGE CLOSURE, 2 - 60" DIAMETER BURIED PIPES	182 00 CY	-	-	17 290	91	3,592	1,150	22 032
			FLOWABLE FILL 1500 PSI	INTAKE CLOSURE, 2 - 60" DIAMETER BURIED PIPES	364 00 CY	-	-	34,580	182	7,184	2,300	44 064
			CONCRETE					51 870	273	10 775	3 451	66,096
			CONCRETE					51 870	273	10 775	3 451	66 096
			B UNIT 2				**(3,395,657)**	**51,870**	**43,086**	**1,964,053**	**930,942**	**(448,792)**
C			**UNIT 3**									
	10 00 00		WHOLE PLANT DEMOLITION									
		10 22 00	CONCRETE									
			BUILDING/EQUIPMENT FOUNDATION/PAD	DRAFT EQUIPMENT	326 00 CY	-	-		367	18,143	7,944	26 087
			BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION FIRE WALLS, PIERS, CURBS AND BASIN	371 00 CY	-	-		417	20,648	9 040	29,688
			BUILDING/EQUIPMENT FOUNDATION/PAD	COOLING TOWER	754 00 CY	-	-		848	41 963	18 373	60,336

Estimate No 24264F
Project No A13351 021
Estimate Date 8/17/20
Prep/Rev/Appr GA/BA/BA

AEP SWEPCO
WILKES POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Area	Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
		10 22 00	CONCRETE									
			MAIN POWER BLOCK FOUNDATION		1 717 00 CY	-	-		1 449	71 689	31 389	103 078
			ELEVATED CONCRETE FLOOR / ROOF		718 00 CY	-	-		430	21 276	9 316	30 592
			TURBINE PEDESTAL		1 303 00 CY	-	-		2 345	116 027	50 801	166,828
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	BOILER ROOM	4,172 00 SF	-	-		63	2,973	1 963	4 935
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	TURBINE ROOM, MACHINE SHOP WATER TREATMENT AREA	9,685 00 SF	-	-		145	6 901	4,556	11 456
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	FD FAN HOUSE	4 400 00 SF	-	-		66	3,135	2 070	5 205
			CONCRETE						6,131	302 754	135 451	438,205
		10 23 00	STEEL									
			STRUCTURAL GIRT AND GALLERY STEEL		2 065 00 TN	-	-		2,098	98 167	33 904	132 072
			STEEL						2,098	98 167	33,904	132,072
		10 24 00	ARCHITECTURAL									
			MASONRY WALLS		25 806 00 SF	-	-		206	9 311	5 640	14 951
			ARCHITECTURAL						206	9,311	5,640	14 951
		10 26 00	CONCRETE CHIMNEY & STACK									
			STEEL STACK	216" DIA X 183' TALL	86 00 TN	-	-		174	7 436	3 908	11,344
			CONCRETE CHIMNEY & STACK						174	7,436	3 908	11,344
		10 26 00	MISCELLANEOUS STRUCTURAL ITEM									
			ELEVATOR		1 00 EA	-	-		134	5 722	3 007	8,729
			MISCELLANEOUS STRUCTURAL ITEM						134	5,722	3,007	8,729
		10 31 00	MECHANICAL EQUIPMENT									
			MAIN BOILER AND APPURTENANCES INCL ID FD FANS AND MOTORS		7,775 00 TN	-	-		15,744	736,679	338,976	1 075 656
			STEAM TURBINE GENERATOR		892 00 TN	-	-		1 806	77,129	40 533	117,662
			FLUES AND DUCTS INCL BREACHING		1 465 00 TN	-	-		3,956	185 078	85 162	270 240
			FEEDWATER SYSTEM DEAERATING EQUIPMENT		150 00 TN	-	-		304	12 970	6,816	19,786
			MISCELLANEOUS SMALL TANKS		96 00 TN	-	-		259	11,068	5 816	16 884
			WATER TREATMENT DEMINERALIZATION & CHEMICAL TREATMENT EQUIPMENT		147 00 TN	-	-		298	12 711	6 680	19 391
			TURBINE ROOM OH CRANE, 60/20 TON		1 00 LS	-	-		267	12,493	4,315	16 808
			MISCELLANEOUS EQUIPMENT		453 00 TN	-	-		917	39 170	20 585	59 755
			MISCELLANEOUS EQUIPMENT	2 5 MW DIESEL GENERATOR	41 00 TN	-	-		83	3 545	1 863	5 408
			CONDENSER		350 00 TN	-	-		709	30 264	15,904	46 168
			CIRCULATING WATER SYSTEM EQUIPMENT		302 00 TN	-	-		612	26,113	13,723	39 836
			CIRCULATING WATER SYSTEM EQUIPMENT	20 TON GANTRY CRANE	30 00 TN	-	-		61	2 594	1 363	3,957
			COOLING TOWER	244 X 73 X 50'	890 600 00 CF	-	-		1,781	76 057	39 970	116 027
			MECHANICAL EQUIPMENT						26,796	1,225,871	581,708	1 807,578
		10 34 00	HVAC									
			MAIN BUILDING HVAC		1 00 LT	-	-		1,125	48,038	25,245	73 283
			HVAC						1,125	48 038	25 245	73 283
		10 35 00	PIPING									
			PIPING, VALVES AND HANGERS	BOILER AND TURBINE PLANT	1 237 00 TN	-	-		2 505	106,960	56 211	163 171
			CIRCULATING WATER SYSTEM EQUIPMENT PIPING AND TUNNELS		1 00 LT	-	-		803	34 288	18 019	52,307
			PIPING, VALVES AND HANGERS	BOP	167 00 TN	-	-		338	14 440	7 589	22 029
			PIPING						3,646	155,688	81,818	237,507
		10 41 00	ELECTRICAL EQUIPMENT									
			TRANSFORMERS		223 00 TN	-	-		596	25 443	13,371	38,814
			LIGHT FIXTURE		500 00 EA	-	-		200	8,540	4,488	13 028
			MISCELLANEOUS ELECTRICAL EQUIPMENT		295 00 TN	-	-		788	33 658	17,688	51 346
			ELECTRICAL EQUIPMENT						1 584	67,641	35,547	103,188
		10 42 00	RACEWAY CABLE TRAY, & CONDUIT									
			CONDUIT		167 00 TN	-	-		1 086	46,351	24,359	70 709
			CABLE TRAY		167 00 TN		-		1 002	42 785	22 485	65 270
			RACEWAY, CABLE TRAY, & CONDUIT						2 088	89,136	46 844	135 980
		10 43 00	CABLE									
			COPPER WIRE / CABLE		160 00 TN	-	-		1,600	68,320	35,904	104,224

Estimate No 24264F
Project No A13351 021
Estimate Date 8/17/20
Prep/Rev/Appr GA/BA/BA

AEP SWEPCO
WILKES POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

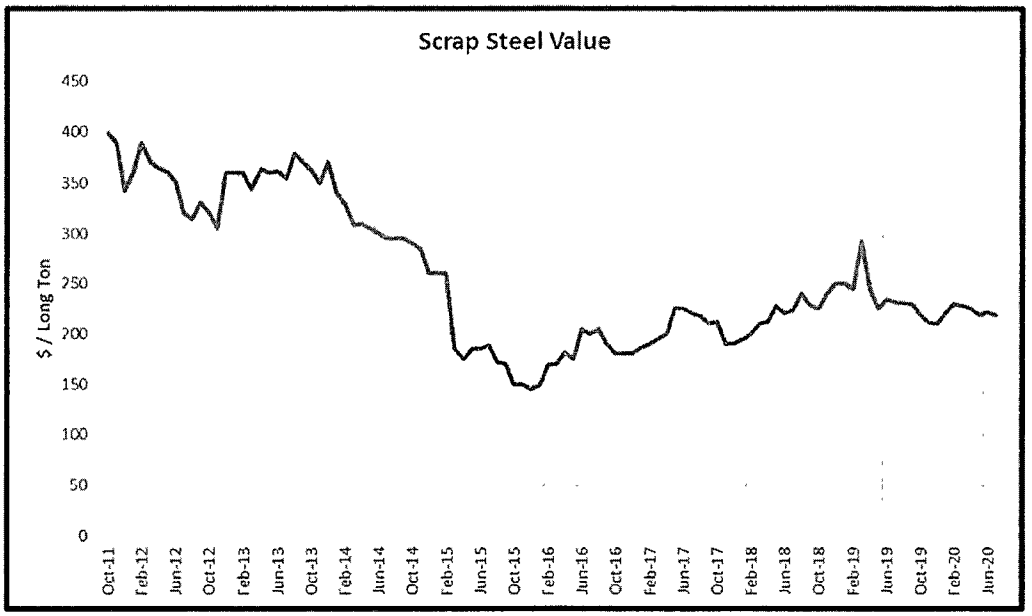
Area	Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
			CABLE						1,600	68,320	35,904	104,224
			WHOLE PLANT DEMOLITION						45,583	2,078,084	988,976	3,067 060
	18 00 00		SCRAP VALUE									
		18 10 00	CARBON STEEL									
			CARBON STEEL		-16 108 00 TN	-	(2 673 928)	-				(2 673 928)
			CARBON STEEL				(2,673,928)					(2,673,928)
		18 30 00	COPPER									
			SOLID COPPER	ISO PHASE	-1 50 TN	-	(6 405)	-				(6,405)
			ADMIRALTY BRASS	CONDENSER TUBES	-129 00 TN	-	(439 890)	-				(439,890)
			#1 INSULATED COPPER WIRE 65%		-160 00 TN	-	(359 840)	-				(359 840)
			COPPER				(806 135)					(806,135)
			SCRAP VALUE				(3,480,063)					(3 480,063)
	22 00 00		CONCRETE									
		22 13 00	CONCRETE									
			FLOWABLE FILL 1500 PSI	DISCHARGE CLOSURE 2 - 60" DIAMETER BURIED PIPES	364 00 CY	-	-	34 580	182	7,184	2 300	44 064
			FLOWABLE FILL 1500 PSI	INTAKE CLOSURE 2 - 60" DIAMETER BURIED PIPES	364 00 CY	-	-	34 580	182	7,184	2 300	44 064
			CONCRETE					69,160	364	14,367	4,601	88,128
			CONCRETE					69,160	364	14,367	4 601	88,128
			C UNIT 3				**(3,480,063)**	**69,160**	**45,947**	**2,092,451**	**993,577**	**(324,875)**
D			**COMMON FACILITIES**									
	10 00 00		WHOLE PLANT DEMOLITION									
		10 21 00	CIVIL WORK									
			REMOVE FENCE	REMAIN IN PLACE	0 00 LF	-	-	0		0	0	0
			REMOVE RAILROAD TRACK RAIL, TIES, SPREAD BALLAST		5 600 00 TF	-	-		1 260	61,979	57,330	119,309
			PAVED SURFACES		5 347 00 SY	-	-		642	31 562	29,195	60,757
			CIVIL WORK						1,902	93 542	86 525	180,066
		10 22 00	CONCRETE									
			BUILDING/EQUIPMENT FOUNDATION/PAD	MISC EQUIPMENT PADS AND SITE BLD FOUNDATIONS	2,400 00 CY	-	-		2 700	133 569	58,482	192,051
			BUILDING/EQUIPMENT FOUNDATION/PAD	TANK AND PUMP FOUDATIONS	822 00 CY	-	-		925	45 747	20 030	65 777
			BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION, FIRE WALLS PIERS CURBS AND BASIN	30 00 CY	-	-		34	1 670	731	2,401
			BUILDING/EQUIPMENT FOUNDATION/PAD	NEW MEETING ROOM ADDITION	60 00 CY	-	-		68	3 339	1,462	4 801
			BUILDING/EQUIPMENT FOUNDATION/PAD	NEW OFFICE BUILDING ADDITION	60 00 CY	-	-		68	3,339	1,462	4,801
			BUILDING/EQUIPMENT FOUNDATION/PAD	WELD SHOP BUILDING ADDITION	133 00 CY	-	-		150	7,402	3,241	10 643
			BUILDING/EQUIPMENT FOUNDATION/PAD	COMPRESSED GAS STORAGE	33 00 CY	-	-		37	1 837	804	2,641
			INTAKE STRUCTURES		1 00 LT	-	-		400	19,788	8,664	28 452
			CURBS		500 00 LF	-	-		6	295	273	568
			WALKWAYS		600 00 CY	-	-		315	15 583	6 823	22,406
			CONCRETE						4,701	232,569	101,972	334 541
		10 24 00	ARCHITECTURAL									
			BUILDING	JUNCTION HOUSE (45 x 35 x 12')	18 900 00 CF	-	-		57	2 557	1 549	4,106
			BUILDING	WORKSHOP AND SHOP STORE ROOM EAST OF PLANT BETWEEN UNITS 2 & 3 INTAKES (40 x 30 x 12')	14 400 00 CF	-	-		43	1,948	1 180	3 129
			BUILDING	WATER TREATMENT	9,000 00 CF	-	-		27	1 218	738	1 955
			BUILDING	MISCELLANEOUS SMALL BUILDINGS	30 000 00 CF	-	-		90	4,059	2,459	6,518
			BUILDING	NEW MEETING ROOM ADDITION (53' x 30 5' x 16')	25,864 00 CF	-	-		78	3,499	2,120	5,619
			BUILDING	NEW OFFICE BUILDING ADDITION (53 x 30 5 x 16')	25 864 00 CF	-	-		78	3 499	2 120	5,619
			BUILDING	WELD SHOP ADDITION (80' x 45 x 12')	43 200 00 CF	-	-		130	5 845	3 541	9,386
			BUILDING	COMPRESSED GAS STORAGE (22' X 40' X 22')	10 560 00 CF	-	-		32	1,429	866	2,294
			ARCHITECTURAL						533	24 055	14,571	38,626
		10,26 00	MISCELLANEOUS STRUCTURAL ITEM									
			MISCELLANEOUS SMALL OBSTACLE REMOVAL FROM SITE		1 00 LT	-	-		2,000	85 400	44 880	130,280
			MISCELLANEOUS STRUCTURAL ITEM						2,000	85,400	44 880	130 280
		10 31 00	MECHANICAL EQUIPMENT									
			MISCELLANEOUS STORAGE TANKS AND PUMPS		343 00 TN	-	-		926	39 544	20 782	60 326

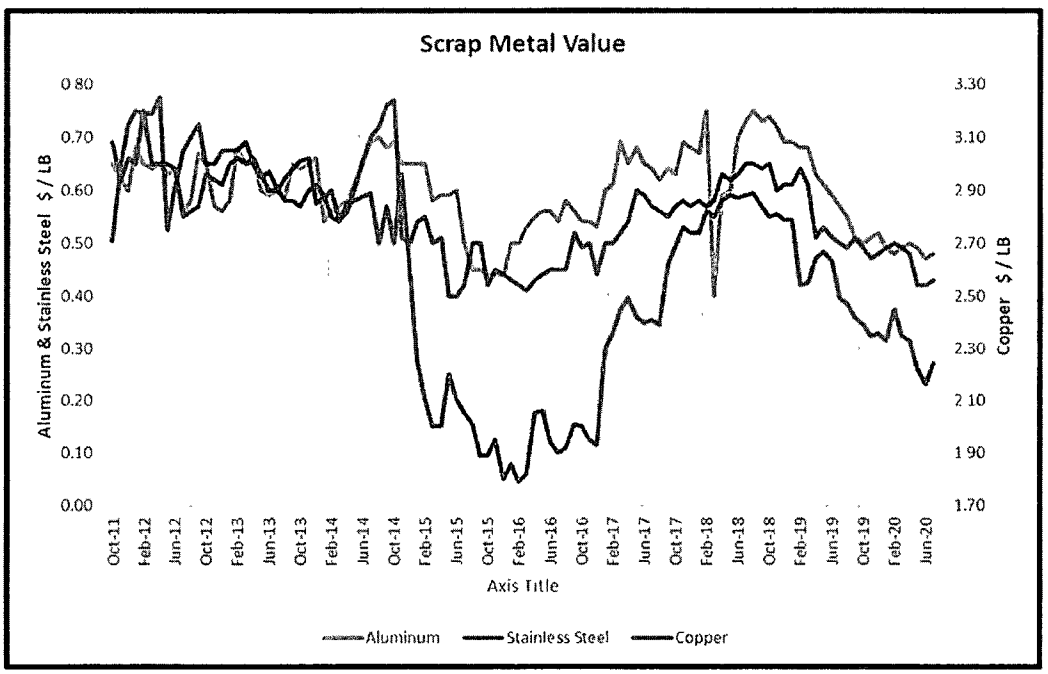
Estimate No 24264F
Project No A13351 021
Estimate Date 8/17/20
Prep/Rev/Appr GA/BA/BA

AEP SWEPCO
WILKES POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Area	Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
		10 31 00	MECHANICAL EQUIPMENT									
			TANKS AND SILOS	DIESEL OIL TANK 75 000 GAL	91 00 TN	-	-		246	10 491	5 514	16 005
			MISCELLANEOUS FUEL OIL EQUIPMENT		50 00 TN	-	-		135	5,765	3,029	8 794
			MECHANICAL EQUIPMENT						1,307	55,800	29,325	85,125
		10 35 00	PIPING									
			HYDRANTS		1 00 LS	-	-		60	2 951	2 730	5 681
			PIPING						60	2 951	2 730	5 681
		10 41 00	ELECTRICAL EQUIPMENT									
			OUTDOOR LIGHT POLE / FIXTURE		180 00 EA	-	-		270	11 529	6 059	17,588
			ELECTRICAL EQUIPMENT						270	11,529	6 059	17,588
			WHOLE PLANT DEMOLITION						10 773	505 846	286 062	791,908
	18 00 00		SCRAP VALUE									
		18 10 00	CARBON STEEL									
			CARBON STEEL		-484 00 TN	-	(80,344)	-				(80,344)
			CARBON STEEL	RAILROAD TRACK RAIL	-59 00 TN	-	(9 794)	-				(9,794)
			CARBON STEEL				(90,138)					(90 138)
			SCRAP VALUE				(90 138)					(90,138)
	21 00 00		CIVIL WORK									
		21 17 00	EARTHWORK, EXCAVATION									
			FOUNDATION EXCAVATION USING 1 CY BACKHOE	CONTAMINATED SOIL BENEATH OIL TANK	2,175 00 CY	-	-		326	18 032	5 602	23,634
			MASS EXCAVATION	LEVEL BERMS AND DIKES	1 000 00 CY	-	-		40	2 060	3 782	5 842
			EARTHWORK, EXCAVATION						366	20,092	9 384	29,476
		21 21 00	MASS FILL									
			CUT & FILL CLAY, 1500 FT HAUL, 14 CY SCRAPER, DOZER-SPREAD COMPACTION WATERING TRUCK	COVER DISTURBED AREAS OF SITE WITH 2 FT OF SOIL	19,600 00 CY				1 274	65 611	120 469	186 080
			MASS FILL						1 274	65 611	120,469	186,080
		21 47 00	LANDSCAPING									
			HYDRO SEEDING		12 00 AC	25 872	-	-		-	-	25 872
			LANDSCAPING			25,872						25 872
		21 62 00	WASTE DISPOSAL									
			DISPOSAL AND TRANSPORTATION FEE	BUILDING DEBRIS	1 500 00 CY	27 000	-				-	27 000
			DISPOSAL AND TRANSPORTATION FEE	CONTAMINATED SOIL BENEATH OIL TANK	2 175 00 CY	65,250	-				-	65 250
			DISPOSAL FEE CONTAMINATED MATERIAL	PERCOLATION PONDS (15 000 SF)	4 018 00 CY	176 792	-				-	176 792
			TRANSPORTATION CONTAMINATED MATERIAL	PERCOLATION PONDS (15 000 SF)	4 018 00 CY	40,180	-				-	40 180
			WASTE DISPOSAL			309,222						309 222
			CIVIL WORK			335 094			1,640	85,703	129 854	550,650
	22 00 00		CONCRETE									
		22 13 00	CONCRETE									
			FLOWABLE FILL 1500 PSI	DISCHARGE CLOSURE FILL 2 - 72" DIAMETER BURIED PIPES	576 00 CY	-	-	54 720	288	11 367	3 640	69 728
			CONCRETE					54,720	288	11,367	3,640	69,728
			CONCRETE					54,720	288	11,367	3,640	69,728
			D COMMON FACILITIES			**335,094**	**(90,138)**	**54,720**	**12,701**	**602,917**	**419,556**	**1,322,148**


Scrap Steel Value
$ / Long Ton
450
400
350
300
250
200
150
100
50
0
Oct-11
Feb-12
Jun-12
Oct-12
Feb-13
Jun-13
Oct-13
Feb-14
Jun-14
Oct-14
Feb-15
Jun-15
Oct-15
Feb-16
Jun-16
Oct-16
Feb-17
Jun-17
Oct-17
Feb-18
Jun-18
Oct-18
Feb-19
Jun-19
Oct-19
Feb-20
Jun-20


Scrap Metal Value
Aluminum & Stainless Steel $ / LB
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
Copper $ / LB
3.30
3.10
2.90
2.70
2.50
2.30
2.10
1.90
1.70
Axis Title
Aluminum
Stainless Steel
Copper

EXECUTIVE SUMMARY OF JASON A. CASH

Jason A. Cash, Accounting Senior Manager within Corporate Accounting for American Electric Power Service Corporation, testifies with regard to the depreciation expense for Southwestern Electric Power Company (SWEPCO or the Company). Mr. Cash recommends revised depreciation accrual rates for electric plant in service based on a depreciation study for SWEPCO's electric utility plant in service at December 31, 2019, adjusted as necessary for the units that were retired in 2020. Schedules I and II in his Depreciation Study Report detail the results of the study. The depreciation rates determined by the study are intended to provide recovery of invested capital, cost of removal, and credit for salvage over the expected life of the property. The revised depreciation rates are primarily required as a result of changes in plant investment levels, expected life estimates, and net salvage values of SWEPCO's property.

Based on the depreciation study he performed of SWEPCO's Generation, Transmission, Distribution, and General Plant depreciable electric utility plant in service as of December 31, 2019, adjusted as necessary for the units that were retired in 2020, Mr. Cash recommends the following composite depreciation rates for SWEPCO:

	Composite Rates
Production Plant	2.17%
Transmission Plant	2.33%
Distribution Plant	2.80%
General Plant	3.07%
Total	2.65%

Mr. Cash's recommended depreciation rates are 0.36% percent higher overall than the rates established in SWEPCO's prior base rate case, Docket No. 46449. Based on the results of his study and applying the recommended depreciation rates to total Company plant-in-service as of December 31, 2019, adjusted as necessary for the units that were retired in

2020, the recommended depreciation rates produce an increase in annual depreciation expense of $31,659,208 on a total Company basis as compared to the existing rates. Mr. Cash's recommended depreciation rates applied to the adjusted test year plant-in-service produce the annual depreciation expense sponsored by SWEPCO witness Michael A. Baird and set forth in Schedule D-4.

The methods and procedures utilized by Mr. Cash are described in the depreciation study report for SWEPCO attached to his testimony. All of the property was considered on a group plan, where depreciation is accrued upon the basis of the original cost of all property included in each depreciable plant group. The dollars in each primary plant account are considered as a separate group for depreciation accounting purposes and an annual depreciation rate for each account is determined. For SWEPCO's study, the plant groups consisted of the individual primary plant accounts for Production, Transmission, Distribution, and General Plant property.

The depreciation rates were calculated by the Average Remaining Life Method. For Production Plant, the generating unit retirement dates and the interim retirement history for the individual plant accounts were used to determine the average service lives and remaining service lives. The average service lives for Transmission, Distribution, and General Plant were determined using statistical procedures similar to those used in the insurance industry in studies of mortality. The historical retirement experience of these property groups was studied using the Iowa-type retirement dispersion curves.

Removal and salvage amounts specific to final removal of SWEPCO's generating stations at the end of their useful life were based on dismantling studies performed by SWEPCO witness Paul M. Eiden (Mr. Eiden is an Officer, Vice President, and Project

Director with Sargent & Lundy^{LLC}). Mr. Eiden's demolition studies provided terminal net salvage amounts, excluding any costs to remove asbestos and to cover ash ponds and landfills, stated at a 2020 price level. Mr. Cash applied a 2.22% inflation rate factor to the net salvage amounts provided in Mr. Eiden's demolition studies to determine the terminal net salvage amount at each plant's retirement year. The terminal net salvage amount after inflation was used in the calculation of production plant net salvage percentages in the depreciation study. The cost to remove asbestos and to cover ash ponds and landfills are included in the Company's accounting for asset retirement obligations (ARO), and the depreciation and accretion on the AROs are incorporated in cost of service outside of the depreciation study. The proposed ARO adjustment amounts are presented in Mr. Baird's testimony.

The Transmission, Distribution, and General Plant accounts' net salvage for each property group was determined based on historical experience.

PUBLIC UTILITY COMMISSION OF TEXAS

APPLICATION OF

SOUTHWESTERN ELECTRIC POWER COMPANY

FOR AUTHORITY TO CHANGE RATES

DIRECT TESTIMONY OF

JASON A. CASH

FOR

SOUTHWESTERN ELECTRIC POWER COMPANY

OCTOBER 2020

TESTIMONY INDEX

SECTION		PAGE
I.	INTRODUCTION	1
II.	PURPOSE OF TESTIMONY	2
III.	DEFINITION OF DEPRECIATION	3
IV.	DEPRECIATION STUDY OVERVIEW	4
V.	STUDY METHODS AND PROCEDURES	5
VI.	STUDY RESULTS	9
VII.	CONCLUSION	11

EXHIBITS

EXHIBIT	DESCRIPTION
EXHIBIT JAC-1	Rate Case Experience of Jason A. Cash
EXHIBIT JAC-2	Depreciation Study Report
EXHIBIT JAC-3	Depreciation Study Work Papers (CD)

(These Work Papers are voluminous and are provided on a CD)

I. INTRODUCTION

Q. WILL YOU PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION?

A. Yes. My name is Jason A. Cash. My business address is 1 Riverside Plaza, Columbus, Ohio 43215. My position is Accounting Senior Manager within Corporate Accounting for American Electric Power Service Corporation (AEPSC), a wholly owned subsidiary of American Electric Power Company, Inc. (AEP).

Q. WHAT ARE YOUR PRINCIPAL AREAS OF RESPONSIBILITY?

A. My responsibilities include the oversight of AEPSC's Property Accounting department along with providing the AEP electric operating subsidiaries, including Southwestern Electric Power Company (SWEPCO or the Company), with accounting support for regulatory filings, including the preparation of depreciation studies and testimony. I also monitor regulatory proceedings and legislation for accounting implications and assist in determining the appropriate regulatory accounting treatment.

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A. I graduated with a Bachelor of Science degree with a major in accounting from The Ohio State University in 2000. In 2000, I joined AEPSC and have held several positions within the Accounting organization, including general ledger accounting and financial reporting for Ohio Power Company and AEPSC. From 2008 through 2013, I worked in AEPSC's Transmission Accounting department where I was promoted to Supervisor of Transmission Accounting in 2013. From 2014 through 2019, I worked in AEPSC's Accounting Policy & Research department as a Staff

Accountant and was later promoted to Senior Staff Accountant in 2019. In 2019, I was promoted to my current position of Accounting Senior Manager.

Q. HAVE YOU PRESENTED TESTIMONY IN RATE AND DEPRECIATION PROCEEDINGS BEFORE REGULATORY AGENCIES?

A. Yes. EXHIBIT JAC-1 details my rate case and depreciation experience.

Q. HAVE YOU HAD ANY FORMAL TRAINING RELATING TO DEPRECIATION AND UTILITY ACCOUNTING?

A. Yes. I am a member of the Society of Depreciation Professionals (SDP) and was a former at-large director for the SDP. I have completed training courses offered by the SDP, which include Depreciation Fundamentals, Life and Net Salvage Analysis, and Analyzing the Life of Real World Property. These training classes included topics such as introduction to plant and depreciation accounting, data requirements and collection, depreciation models, life cycle analysis, current regulatory issues, actuarial life analysis, net salvage analysis, and simulation life analysis.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. My testimony recommends revised depreciation accrual rates for electric plant in service based on a depreciation study report (See EXHIBIT JAC-2) for SWEPCO's electric utility plant in service at December 31, 2019, adjusted as necessary for the units that were retired in 2020. Schedules I and II in the Depreciation Study Report detail the results of the study. The depreciation rates determined by the study are

intended to provide recovery of invested capital, cost of removal, and credit for salvage over the expected life of the property.

The revised depreciation rates are primarily required as a result of increases in investment levels since the Company's last depreciation study dated December 31, 2015. SWEPCO's generating plants accounted for $16.4 million, or a little over half, of the $31.7 million total annualized depreciation expense/accrual increase (see Table 1 below).

Q. WHAT SCHEDULES TO SWEPCO'S RATE FILING PACKAGE DO YOU SPONSOR OR CO-SPONSOR?

A. I sponsor Schedules D-2 Booking Methods, D-5 Depreciation Study, and D-7 Summary of Book Salvage. I co-sponsor Schedules D-4 Depreciation Exp. & Amort. Exp. with Company Witness Baird and D-6 Generating Unit Retirement Data and D-8 Service Life with Company Witness Monte McMahon.

III. DEFINITION OF DEPRECIATION

Q. PLEASE EXPLAIN THE DEFINITION OF DEPRECIATION AS USED IN PREPARING YOUR STUDY.

A. The definition of depreciation that I used in preparing the study is the same that is used by the Federal Energy Regulatory Commission (FERC) and the National Association of Regulatory Utility Commissioners. That definition is:

> Depreciation, as applied to depreciable electric plant, means the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of electric plant in the course of service from causes which are known to be in current operation and against which the utility is not protected by insurance. Among the

causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand and requirements of public authorities.

Service value means the difference between original cost and the net salvage value (net salvage value means the salvage value of the property retired less the cost of removal) of the electric plant.

IV. DEPRECIATION STUDY OVERVIEW

Q. HOW DO THE REVISED DEPRECIATION RATES AND ANNUAL ACCRUALS RESULTING FROM YOUR DEPRECIATION STUDY COMPARE WITH SWEPCO'S CURRENT RATES AND ACCRUALS?

A. A comparison of SWEPCO's current rates and accruals and the study rates and accruals is shown below in Table 1 based on total Company plant in service as of December 31, 2019, adjusted as necessary for the units that were retired in 2020.

Table 1 - Depreciation Rates and Accruals
Based on Plant In Service at December 31, 2019 (as adjusted)
(Total Company)

	Existing		Study		
Functional Plant Group	Rates	Accruals	Rates	Accruals	Difference
Production	2.33%	99,513,823	2.71%	115,877,699	16,363,876
Transmission	2.06%	42,285,974	2.33%	47,890,727	5,604,753
Distribution	2.33%	52,941,254	2.80%	63,573,769	10,632,515
General	3.52%	7,383,029	3.07%	6,441,093	(941,936)
Total Depreciable Plant	2.29%	202,124,080	2.65%	233,783,288	31,659,208

Note: The Dolet Hills Power Station was not included in the depreciation study and as a result is not included in the Production Plant function depreciation rates proposed in this case.

Based on results of the study and applying SWEPCO rates to total company plant in service as of December 31, 2019, adjusted as necessary for the units that were retired in 2020, the recommended revised depreciation rates produce an increase in annual depreciation expense of $31,659,208 on a total company basis. SWEPCO's current depreciation rates are based on the Public Utility Commission of Texas's (PUC or Commission) final order from PUC Docket No. 46449.

It should be noted that the accrual amounts in the above table result from applying the applicable depreciation rates to depreciable balances at December 31, 2019 adjusted as necessary for the units that were retired in 2020. They do not represent the depreciation accruals that SWEPCO is requesting to be included in its cost of service. The annual depreciation accruals that SWEPCO requests in cost of service in this proceeding are calculated and supported by Company witness Baird and result from his application of my recommended depreciation rates to the adjusted plant in service balances at test year end.

V. STUDY METHODS AND PROCEDURES

Q. PLEASE BRIEFLY DESCRIBE THE METHODS AND PROCEDURES USED IN THE STUDY.

A. The methods and procedures are fully described in my depreciation study report which is attached as EXHIBIT JAC-2. In summary, all of the property included in the depreciation report was considered as part of a group plan methodology. Under the group plan, depreciation is accrued on the basis of the original cost of all property included in each depreciable plant group instead of individual items of property.

Upon retirement of any depreciable property, its full cost, less any net salvage realized, is charged to the accumulated provision for depreciation regardless of the age of the particular item retired.

Also under this methodology, the investment dollars in each primary plant account are considered as a separate group for depreciation accounting purposes and an annual depreciation rate for each primary plant account is determined. In this study, the plant groups consisted of the individual primary plant accounts for Production, Transmission, Distribution, and General Plant property.

The depreciation rates were calculated by using the Average Remaining Life method, which is the same method that was used to calculate SWEPCO's current depreciation rates. The Average Remaining Life method recovers the original cost of the plant, adjusted for net salvage, less accumulated depreciation over the average remaining life of the plant.

For Production Plant, estimated generating unit retirement dates for individual plant accounts were used to determine average service lives and remaining lives of each specific account at each plant. The average service lives for the Company's Transmission, Distribution and General Plant (Account 390) were determined using statistical procedures similar to those used in the insurance industry in studies of human mortality. The historical retirement experience of property groups was studied and retirement characteristics of the property were described using the Iowa-type retirement dispersion curves.

Net salvage for each property group was determined based on actual historical experience for Production, Transmission, Distribution, and General Plant accounts.

In addition, Production plant included terminal retirement net salvage amounts for Steam and Other Production Plant. To determine these terminal retirement amounts, SWEPCO commissioned the independent engineering firm, Sargent & Lundy (S&L), to update the conceptual dismantling cost estimates that were used to establish SWEPCO's current depreciation rates. The recommended depreciation rates for Production Plant included terminal dismantling cost for Arsenal Hill, Knox Lee, Lieberman, Lone Star, Mattison, Stall, Wilkes, Flint Creek, Pirkey, Turk, and Welsh Plants at their estimated retirement dates.

Q. WHY DID SWEPCO RETAIN S&L TO PERFORM GENERATING PLANT DISMANTLING STUDIES?

A. S&L dismantling studies provide (i) estimated terminal removal cost and salvage amounts specific to each of the Company's generating stations and (ii) a reasonable method of determining future expected terminal net salvage amounts. Copies of the S&L dismantling studies are included in SWEPCO witness Paul M. Eiden Exhibit PME-2.

Q. HOW DID YOU USE THE RESULTS OF THE S&L ANALYSIS IN YOUR DEPRECIATION STUDY?

A. S&L provided terminal net salvage amounts stated at a 2020 price level (excluding any asbestos, ash pond, or landfill type removal costs). I applied a 2.22% inflation rate factor to the net salvage amounts provided by the S&L study to determine the terminal net salvage amount at each plant's retirement year. The terminal net salvage amount after inflation was used in the calculation of net salvage percentages in the depreciation study.

Q. WHAT IS THE SOURCE OF THE 2.22% INFLATION RATE USED FOR THIS PURPOSE?

A. The 2.22% annual inflation rate was taken from a publication titled "The Livingston Survey" dated December 2019. The Livingston Survey is published by the research department of the Federal Reserve Bank of Philadelphia and provides a long-term inflation outlook that projects an inflation rate for a 10-year period.

Q. WHY DID S&L'S GENERATING PLANT DISMANTLING STUDY ESTIMATES EXCLUDE THE COST TO REMOVE ASBESTOS AND TO COVER ASH PONDS AND LANDFILLS?

A. The cost to remove asbestos and to cover ash ponds and landfills are included in the Company's accounting for asset retirement obligations (ARO) and the depreciation and accretion on these ARO's are incorporated in the cost of service outside of the depreciation study.

Q. PLEASE EXPLAIN ANY DEPRECIATION STUDY ADJUSTMENTS THAT WERE USED TO CALCULATE DEPRECIATION RATES.

A. Depreciation rates are calculated using total Company plant in service and accumulated depreciation amounts. Because Arkansas, FERC, Louisiana and Texas have different depreciation rates, it is necessary to adjust the total Company weighted average booked accumulated depreciation amount to a Texas total Company amount to take into account the historical jurisdictional difference in accumulated depreciation caused by the different depreciation rates.

In May 2020, the Company retired the Lone Star Plant, Units 2 and 3 at the Knox Lee Plant and Unit 2 at the Lieberman Plant. The depreciation study reflects

each of these retirements, with the remaining cost of the Lone Star Plant being included in the accumulated depreciation reserve allocation that was mentioned above. The remaining balance of the Lone Star Plant included with the depreciation study is $820 thousand. The final demolition cost of the Lone Star Plant is included in the Lieberman Plant net salvage calculation in order to recognize the future cost of demolition that will occur at the plant and to properly recognize a cost of removal accrual in current depreciation rates.

Even though the Dolet Hills Power Station remains in service, all costs related to the plant are excluded for the purposes of calculating depreciation rates. Please refer to the testimonies of Company witnesses Baird and Brice for more information on the proposed ratemaking for the remaining undepreciated value of the Dolet Hills Power Station.

VI. STUDY RESULTS

Q. PLEASE EXPLAIN THE RESULTS OF YOUR STUDY FOR PRODUCTION PLANT.

A. As Table 1 above indicates, the composite depreciation rate for Production Plant increased from 2.33% to 2.71% (or 0.38%) and the annualized depreciation accrual increase due to the change in Production Plant depreciation rates was approximately $16.4 million on a total company basis. The depreciation accrual increase was primarily due to an increase in the plant in service balance of $119.2 million, since depreciation rates were last changed.

Q. DID THE CURRENT DEPRECIATION STUDY'S PRODUCTION PLANT DEPRECIATION RATE CALCULATIONS INCLUDE INTERIM RETIREMENTS?

A. No. Interim retirements are those that are expected to occur between the date of the depreciation study and the expected final retirement date of the generating plant. The Commission order in PUC Docket No. 40443 (Finding of Fact No. 195) indicated that it was not reasonable to include interim retirements in the calculation of production plant depreciation rates because the rate at which interim retirements will be made is not known and measurable. Therefore, interim retirements of production plant were not used in the current study's calculation of production plant depreciation rates.

Q. PLEASE EXPLAIN THE RESULTS OF YOUR STUDY FOR TRANSMISSION PLANT.

A. The composite depreciation rate for Transmission Plant increased from 2.06% to 2.33% (or 0.27%) and the annualized depreciation expense accrual increase due to the change in depreciation rates was approximately $5.6 million (see Table 1, above). The increase in Transmission Plant depreciation rates are due to increases in the net salvage ratio for three accounts (Accounts 352, 354, and 356) and decreases in the average service life for two accounts (Accounts 353 and 355). The depreciation rate increase was partially offset by decreases in the net salvage ratio for two accounts (Accounts 353 and 355) and an increase in the average service life for Account 352.

Q. PLEASE EXPLAIN THE RESULTS OF YOUR STUDY FOR DISTRIBUTION PLANT?

A. The composite depreciation rate for Distribution Plant increased from 2.33% to 2.80% (or 0.47%) and the annualized depreciation expense accrual increase due to the change in depreciation rates was approximately $10.6 million (see Table 1, above). The increase in Distribution Plant depreciation rates are due to increases in the net salvage ratio for five accounts (Accounts 364, 365, 367, 368 and 373) and decreases in the average service life for three accounts (Accounts 367, 368 and 370). The depreciation rate increase was partially offset by decreases in the net salvage ratio for two accounts (Accounts 370 and 371) and an increase in the average service life for four accounts (Accounts 361, 362, 369 and 373).

Q. PLEASE EXPLAIN THE RESULTS OF YOUR STUDY FOR GENERAL PLANT?

A. The composite depreciation rate for General Plant decreased from 3.52% to 3.07% (or 0.45%) mainly due to an increase in the average service life for account 390 from 55 years to 58 years.

VII. CONCLUSION

Q. PLEASE PROVIDE A SUMMARY OF THE RESULTS OF THE DEPRECIATION STUDY.

A. The depreciation study resulted in a 0.36% increase in the total composite depreciation rate to be applied to Production, Transmission, Distribution and General Plant. The increase in the composite depreciation rate is primarily due to the change in investment levels since the prior depreciation study dated December 31, 2015.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

RATE CASE EXPERIENCE OF JASON A. CASH					
No.	**Year**	**Company**	**Commission**	**Case, Cause or Docket No.**	**Items Provided/Filed**
1.	2015	Transource West Virginia, LLC	Federal Energy Regulatory Commission	Docket No. ER15-2114-000	Testimony and Depreciation Study
2.	2016	Kingsport Power Company	Tennessee Regulatory Authority	Docket No. 16-00001	Testimony and Depreciation Study
3.	2016	Transource Pennsylvania, LLC and Transource Maryland, LLC	Federal Energy Regulatory Commission	Docket No. ER17-419-000	Testimony and Depreciation Study
4.	2017	Kentucky Power Company	Public Service Commission of Kentucky	Case No. 2017-00179	Testimony and Depreciation Study
5.	2017	Indiana Michigan Power Company	Michigan Public Service Commission	Case No. U-18370	Testimony and Depreciation Study
6.	2017	Indiana Michigan Power Company	Indiana Utility Regulatory Commission	Cause No. 44967	Testimony and Depreciation Study
7.	2018	Appalachian Power Company and Wheeling Power Company	Public Service Commission of West Virginia	Case Nos. 18-0645-E-D and 18-0646-E-42T	Testimony and Depreciation Study
8.	2019	Appalachian Power Company and Wheeling Power Company	Public Service Commission of West Virginia	Case No. 19-0063-E-PC	Testimony